“A CLINICAL EVALUATION OF PACCHAI KARPOORA MATHIRAI FOR KABASURAM (ACUTE BRONCHITIS) IN CHILDREN”

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DECLARATION BY THE CANDIDATE

I hereby declare that this dissertation entitled **"A CLINICAL EVALUATION OF PACCHAI KARPOORA MATHIRAI FOR KABASURAM (ACUTE BRONCHITIS) IN CHILDREN"** is a bonafide and genuine research work carried out by me under the guidance of **Dr. M. Meenakshi Sundaram,M.D(s),** HOD, Department of Kuzhandhai Maruthuvam, National Institute of Siddha, Chennai -47, and the dissertation has not formed the basis for the award of any Degree, Diploma, Fellowship or other similar title.

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BONAFIDE CERTIFICATE

Certified that I have gone through the dissertation submitted by **Dr.R.Saraswathi, (Reg.No: 321414206)** a student of final year M.D(s), Branch-IV, Department of Kuzhandhai Maruthuvam, **National Institute of Siddha**, Tambaram Sanatorium, Chennai-47, and the dissertation work has been carried out by the individual only. This dissertation does not represent or reproduce the dissertation submitted and approved earlier.

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CONTENTS

1.INTRODUCTION

Siddha system of medicine is a traditional system of medicine which is spiritualy enriched one. Siddha system is an integrated part of Indian system ,which is very potent and unique . Lord Shiva conveyed the knowledge of medicine to his wife Parvati and the knowledge was passed from her to Nandi and finally it was given to the Siddhars. The word Siddha denotes one who has achieved some extraordinary powers (*siddhi*). This achievement was related to the discipline of mind and its superiority over body, and was accomplished through both yoga and medicine.

Siddhars were saints, doctors, alchemists and mystics all in one. Siddhars were spiritual adepts who possessed the ashtama siddhis, or the eight supernatural powers.Among 18 Siddhars Agasthiyar is regarded as the originator of the Siddha medicine

According to Siddhars healthy soul can only be developed through a healthy body. So they developed methods and medication that are believed to strengthen their physical body and thereby their souls.

They practiced intense yogic practices, including meditation, and achieved supernatural powers and gained the supreme wisdom and overall immortality. Through this spiritualy attained supreme knowledge, they wrote scriptures on all aspects of life, from arts to science and truth of life to miracle cure for diseases.

From the manuscripts, the Siddha system of medicine developed into part of Indian medical science.

Basics of Siddha Medicine

According to the Siddha medicine various psychological and physiological functions of the body are attributed to the combination of **three humors** Vatha Pitha and Kaba **and seven elements.** (i,e.Saaram, Seeneer, Oon, Kozhuppu, Enbu, Moolai, Sukilam)

Under normal condition equilibrium of three humors (vatha, pitha and kaba) is 1:1/2:1/4 distributed.. Factors like environment, climatic conditions, diet, physical activities, and stress affect this equilibrium and causes diseases. Siddha diagnosis deals with the examination of pulse, eyes, urine, tongue, voice, skin colour and stools.

The Siddha system has developed a rich treasure of medical knowledge that includes the use of herbs, metals and minerals. Depending on the nature and duration of illness, the results with these medicines may take a variable time to be noticeable.

Siddha medicine works by revitalizing and rejuvenating the organs. This helps to correct the dysfunctions responsible for causing the diseases. It restores the normal functioning of the organs and maintains the ratio of the three doshas – Vatha, Pitta and kapha, thereby providing a healthy state of equilibrium of the body.

Siddha medicine also believes that the universe consists of two entities.

1. Matter
2. Energy.

Siddhars call these energies , the Siva (male) and Shakti (female, creation). It proposes that matter cannot exist without the energy inherent in it and vice versa. Thus the two co-exist and are inseparable.

The drugs used in Siddha medicine were classified on the basis of five properties: Suvai (taste), Guna (character), Veerya (potency), Pirivu (class) and Mahimai (action).

According to the Siddha medicine system diet and life style play a major role not only in curing diseases but also in maintaining health. This concept of the Siddha medicine is termed as *pathya* which is essentially a list of do's and dont's. .

Siddha system emphasizes not only a healthy body but a peaceful mind and pure soul. Hence, it is unique when compared to any other medical system.

PAEDIATRIC IN SIDDHA SYSTEM

Balavagadam is the paediatric text in the Siddha system. It deals with the treatment of children from foetal development, care and treatment of the pregnant woman and the nursing mother. The Tamil tradition has *'paruvams'* describing seven specific developmental phases that are common to boys and girls and three additional *paruvams* which are distinct for only boys and girls. The treatments of common disorders are carried out with plant/animal products as well as magical rituals.

In Balavagadam many pediatric diseases are classified based on Agakkarana noigal and Purakarana noigal. Kabasuram is one of the commonly occurring disease in infants and children.

Kabasuram is one of the 20 types of fever. It is described by chills, fever, dry or productive cough , running nose, blockage, discomfort and protected indications which might be corresponded with Acute Bronchitis by symptomatically. The etiological

factors, pathogenesis, clinical features of the disease explained in siddha literature are more or less related to Acute Bronchitis described in modern system of medicine.

The drug Pacchaikarpoora mathirai is specified for Kabasuram in Siddha literature Balavagadam. The main ingredients of Pacchaikarpoora mathirai is acchai karpooram (Borneo camphor), Elavangapattai (Cinnamomum verum), Saathikai (Myristica fragrans) Nervalam (Croton tiglium) Katrazhai saaru (Aloe vera)

In this study the author would like to find out the safety and efficacy of Pacchaikarpoora mathirai for the treatment of Kabasuram with the reference of Balavagadam and also trace out the various aspects of Kabasuram, such as etiological factors risk factors, predisposing factors, clinical features, pathogenesis of disease and the investigations available in Siddha as well as in modern system of medicine.

2.AIM and OBJECTIVES

AIM:

To evaluate the efficacy of Pacchai karpoora mathirai for the management of Kabasuram (Acute Bronchitis).

OBJECTIVES:

- To identify the “Kabasuram” and its actual characters of the disease as per the siddha view.
- To explore definition, etiology clinical features, diagnosis and treatment of kabasuram as laid down from various siddha literature.
- To make the correlative study of the Siddha and modern aspect of this disease.
- To study the disease kabasuram on the basic of three thodam, envagai thervugal, neerkuri, neikuri, udal thathukkal, paruva kaalangal, age, sex and economic status.
- To conduct a clinical trial to find out the efficacy of pacchai karpoora mathirai .
- To evaluate the biochemical and pharmacological analysis of the drug.
- To evaluate the efficacy of the trial medicine on anti inflammatory activity by in vitro study.

3.REVIEW OF LITERATURES

3.1. Kabasuram-Siddha aspect

சுரம்

"விண்ணிற் தேவர்க் கெல்லாம்
விளங்குமால் முதல்வன்போல
மண்ணினார் நோய்க்கு முன்னாய்
வருஞ்சுர முதலே யென்னும்
பண்ணிய நிதானந் தன்னைப்
பாடவே பவள மேனிக்
கண்ணுதற் கடவுள் பெற்ற
கணபதி காப்புத் தானே".

- தேரையர் வாகடம்

பொருள்

தேவர்களின் தலைவர் திருமாலே போன்று நோய்களுக்குக்கெல்லாம் சுர நோயே முதலாவதாம்.

I.நோய் இயல்பு

"சொல்லவே சுரத்திலுட திறமைகேளாய்
சடத்திலுள்ளா பணிக்கெல்லா மிராசாலாகும்
எல்லவெ நமனுக்கு மொக்கு மொக்கு
மெழிலோகு பிரலாப கோபமாகும்.
தள்ளலே தக்கனிட வேள்வினைத்தான்
சாம்பசிவன் கோபத்தா லழித்தபோது
நெல்லலே நெற்றிக்கண் சிலாலத்தன்னில்
நேராகப் புறப்பட்டு நேர்ந்ததாமே."

-யூகிவைத்திய சிந்தாமணி

நாக்கு, மூக்கு ஆகியன வெளுத்துக் காணப்படும். மார்பு நோகும், இருமல் இளைப்பு ஆகியன தோன்றும், மூச்சு விட சிரமம், விக்கல் தாகம் ஆகியன தோன்றும் தொண்டை நோகும், மேல் மூச்சு வாங்கும், தினவெடுக்கும்.

II.வேறுபெயர் (Synonyms):

"வெம்மை வெப்பு வெறுக்குங் காய்ச்சல்
தும்மாக் காங்கை சூடு தழலனல்
சும்மைப் பிறப்பில் இறப்பில் தொடர்நோய்
பம்மல்நோய் காந்தல் பலபெயர் சுரமே"

-சித்த மருத்துவம் (பொது)

வெம்மை, வெப்புநோய், காந்தல், காங்கை, காய்ச்சல், சூடு, அனல், பிறப்பிலும் இறப்பிலும் தொடரும் நோய். பம்மல் நோய் என பல பெயர்கள் உண்டு.

III.நோய் வரும் வழி (Etiology)

1. **According to Siddhar Theraiyar**

First kabam will be increased in the stomach and then due to its action, body temperature will be increased & it results in fever.

" .... குடல் தன்னில்
சீதமலாது சுரமும் வராது திறமாமே " - தேரையர்

2. **According to Pothu Maruthuvam**

- மந்தம்
- மலக்கட்டு
- முக்குற்றங்கள் மிகுதிப்படுத்தக்கூடிய உணவுகளை உண்ணல்
- மிகுந்த குளிர்ச்சி
- மிகு பனி
- மிகுந்த காற்று
- விடக் காற்று
- அதிகமான நீராடல்
- விடம் கலந்த உணவு
- கடும் வெயிலில் திரிதல்
- மழையில் நனைதல்
- தேகத்தில் விட புழுக்கள் சென்று துளைத்தல்

ஆகிய இத்தியாதி அக மற்றும் புறக் காரணங்களால் வளி, அழல், ஐயம் என்னும் முக்குற்றங்களும் கேடடைந்து பல உறுப்புகளுக்கு நோயை விளைவிக்கக் கூடியதான சுரத்தை உண்டாக்கும்.

3.According Roga Nirnaya Saram

- அதி நடை
- அறுசுவை வஸ்து பேதம்

இவைகளால் வாத, பித்த சிலேத்துமங்கள் அதிகரித்து சீதக்கட்டு ஸ்தானத்தைப் பற்றி ஜீரணிக்காத அன்னரசத்தை அனுசரித்து, நரம்பு ரோமத் துவாரங்களை அடைத்து நாபி ஸ்தானத்தில் சேர்ந்து ஜடராக்கினியை மேலில் எழுப்பி அதனுடன் கலந்து சர்வாங்கம் வியாப்பித்தலால் சுரம் பிறக்கிறது.

IV. முக்குறி குணங்கள் (Premonitory Symptoms)

Before the onset of fever, some of the premonitory symptoms will be seen.

- பசியின்னம
- உடல் வலி
- நா வறட்சி
- உணவு வெறுப்பு
- நளிர்
- வாய் கைத்தல்
- பிதற்றல்
- கூசுதல்
- கிறுகிறுப்பு
- மயக்கம்
- தேகங்குத்தல்
- இரவில் தூக்கமின்மை
- நா சுவையறியாமை
- உணவு செரியமை

According to Roga Niranaya Saram

- சுரம்
- மலக்கட்டு
- தேக வலி
- பசியின்மை
- தாகம்
- கண் எரிவு
- தலை பாரம்

V.CLASSIFICATION OF FEVER :

According to various Siddha Literture:

Book Name	Type of Fever
1. Balavagadam – Dr.Pon. Kurasironmani	20
2. Pillaippini Maruthuvam – Dr.A. Sundaresan	32
3. Siddha Maruthuvam Podhu – Dr.K.N. Kuppusamy Reddiar	64
4. Seevaratchamirtham – Arumuga Pillai	312
5. T.V.Sambasiva Pillai Agarathy	64
6. Yugi Vaithya Sinthamani	7
7. Theraiyur Vagadam	40
8. Agathiyar Vaithiya Rathina Surukkam	85(64)
9. The Hand book of Indian Medicine by T.G. Ramamoorthi	85

கபசுரம்

According to Balavagadam , there are 20 Types of fever, one among them is kabasuram.

I.வேறுபெயர்

- சிலேத்துும சுரம், சீத சுரம், ஐய சுரம்,
- ஐயத்தின் இயற்கை நிலைகள், அதன் மிகு குணம் போன்றவற்றை ஒப்பு நோக்கும் பொருட்டு கீழ்க்கண்டவாறு தொகுக்கப்படுகின்றது.

ஐயம் - உயிர் தாது

I.தன்மை

- தன்மை, நெய்ப்பு.
- மந்தம், வழுவழுப்பு.
- மென்மை, திண்மை.

III.வாழுமிடம்

- சமானவாயு, சுழுமுனை.
- ஆக்கினை, விந்து.
- நாக்கு, உண்ணாக்கு.
- கொழுப்பு, மச்சை, குருதி, மார்பு.
- நரம்பு, எலும்பு, மூளை, பெருங்குடல்.

IV.இயற்கைப் பண்பு

- நிலைத்தல்
- நெய்ப்பு
- கீல்களின் அமைப்பின் கட்டுகள்
- பொறையுடைமை (பசி, நீர்வேட்கை, கலக்கம் போன்றவற்றை பொறுத்துக் கொள்ளுதல்)

V.ஐயமிகுணம்

- அக்கினி மந்தப்படல்
- வாய்நீர் ஊறல்
- ஊக்கம் குறைதல்
- உடல் கனமாக தோன்றுவதுடன் குளிர்ச்சியையும் அடைதல்.
- உடல் முற்றும் உள்ள கட்டுகள் தளரல்
- இரைப்பு, உப்பிசம், இருமல் மிகுதூக்கம் உண்டாதல்

VI.KABASURAM IN VARIOUS SIDDHA LITERATURE

According to Balavagadam:

ஐயசுரம்

“மாங்கிசந் தன்னில் வாத
மதுபித்தம் தானுந் தோலில்
தூங்கிடு மெலும்பி லையஞ்
சுகமறத் தோன்றிப் பின்னர்
சாங்கிய மாக நின்று
சரீரத்தில் நோயும் பண்ணும்
ஆங்கிதைச் சொல்ல வொண்ணா
ததீதமாம் ரோகந்தானே”

குழந்தைகளுக்கு உண்டாகும் சுரம் ஐயமாகில் எலும்பில் சார்ந்த உடலை வெதுப்பி வருத்தும்.

According to Pillaipini Maruthuvam:

ஐயசுரம்

“சொன்னா சிலேற்ப சுரமது தான்
தோன்றும் குளிரும் பின்சுரமாய்
மன்னா ரிருமு காச்சலுமாய்
மலமும் பிடித்து வயி றூதூம்
குன்னார் விட்டு விட்டேனே
குளிர்ந்து கால்கை அதைத்து வரும்
இன்னா ரிந்தக்குணம் கண்டால்
இதுபோதும் நாளும் பதினேழு

In Kabasuram before the onset of fever, rigor starts first & then followed by fever, cough, abdominal distention due to constipation, pain present in upper & lower limb & also tiredness, sweetness in mouth, pallor of motion & urine, increased sleep, vomiting, salivation & fever gradually reduced within 17 days.

According to theriyar Vagadam:

"பருகவே சுரந்தானும் பலகா லுண்டாம்
பாரமா யும்பொங்கும் வலியுண்டாகும்
அருகவே யடிக்கடிக்கு வியர்வையாகும்
அன்னந்தான் கொண்டுடனே வாந்தி யுண்டாம்
உருகவே வயிறெல்லா முளைச்சலாகும்
உப்பிசமு மேல்மூச்சு மிருமலுண்டாம்
சுருகவே நாவரண்டு நீர்தாகிக்கும்
கனமான சுரசிலேட்பங் காணச் சொல்லே".

Remittant fever, body pain, vomiting, perspiration, abdominalpain, abdominal distention, cough, dryness of tongue, thirst are symptoms in kabasuram.

According to Theriyar Vagadam:

"விக்க லெடுக்கல் மெய்யோங்கல்
மேனி வெதும்பல் மெய்தினை
கக்குங் குருலோ வுண்டென்னச்
காலே வீங்கும் முகம் வெளுத்தல்
மிக்க அக்கினி மந்திக்கும்
மிகவே யுறக்கந் தான்வருதல்
தக்க இருமல் வாய் நீராஞ்
சாற்றி னோமிவ் விலக்கணமே".

விக்கல் தோன்றும், உடல் பருத்தல், உடலில் வெப்பம் காணல், தினவுண்டாதல், கால் வீங்கல், முகம் வெளுத்தல், செரிப்புத்தன்மை குன்றுதல், மிக்க உறக்கங்காணல், இருமலும், வாய்நீர் ஊறலும் தோன்றுதல்.

According to Agathiyar Aayul Vedham:

"தலனத்துடல் வெதும்பிதன் செவிமூக்கடைக்கு
மிலகியவுதர முற்றிவிரந்து மெய்சுளுக்குக் குத்து
விலகியே யசனஞ்செல்லா வெதும்பியே சிலேர்ப்பனத்தில்
நிலவியசுரங்கள் கண்டு நிச்சயமறிந்து செய்யே".

தலை கனத்துடன் உடலும் வெதும்பி செவி, மூக்கு ஆகியவை அடைத்துக் கொள்ளும், வயிறு முற்றி விரைத்து விடும். உடம்பில் சுளுக்கெடுத்து குத்துண்டாகும், உணவில் விருப்பம் இருக்காது.

According to Pararasasekaram Balaroga Nidhanam

"சென்னிமிகக் கனத்திடித்துச் சீறிமுக முங்கனத்து
மின்னுமனல் போற்சுரமு மென்மேலு மேமுடுகி
மன்னுசிரத் தூடதிக வலியிடிப்பு மேயாகும்
அன்னநடை மின்னேயி தறிலசேற் பனசுரமே".

Heaviness of head, anger, Puffiness of face, high grade fever, severe headache,are the symptoms of kabasuram.

According to Roga Nirnaya Saram:

கண், முகம், மூத்திரம், மல வெளுப்பு காணும், இருமல், கோழை, நெஞ்சில் வலி காணும். கபாதிக்கத்தினால் உண்டான கரத்தில் கை, கால் கனத்தல், சிரசில் நீர் கொண்ட வலி, உடல் இளைத்தல் , விட்டு விட்டு சுரம் அடித்தல் , நெஞ்சுவலி , நடுக்கம், தலையில் வியர்வை, அரோசிகம், அதிக தூக்கம், வயிற்றில் எரிச்சல், வாயில் இனிப்பு, இருமலுடன் கோழை, வாந்தி, சோர்வு ஆகிய குறி குணங்கள் காணப்படும்.

VII.குற்ற முதலிய வேற்பாடுகள் (Three humours derangement)

"வகுத்த முறப்பாடு மந்தத்தால் வாயுவாம்
மிகுந்தனல் வாயுவால் விளைந்திடும் நோயேயாம்
பகுத்திவை இரண்டால் பார் அச் சுரமுதும்
முகத்தலை மூன்றல் முத்தோஷங்கானுமே".

உடலில் மந்தம் ஏற்பட்டால் வாயு உண்டாகும். வாயுவும் மந்தமும் கூடுவதால் சுரமும், சுரம் வாயு மந்தம் மூன்றும் கூடுவதால் உடலில் வாத, பித்த, கப தோஷங்கள் விகற்பப்பட்டு நோய்கள் ஏற்படுகின்றன.

-பதினென் சித்தர் நாடி நூல்

VIII. நாடி நடை

" வாதகப நாடி, ஐயநாடி , கபபித்த நாடி
ஐய சுரத்தினை தொடரும் நோய்".

IX.மீளாத ஐயசுரம்

"ஐயசுரத்தின் குணங்கேளா யகடு பொருமிக்கண் வெளுக்கும்
கையும் காலுஞ் சோர்ந்துவிழும் கண்க ளுள்ளே தான்வீழும்
தொய்யல் சுரமும் விடாததுவும் சொல்லுந்தோட மானாற்போல்
மெய்யு நாக்கு மேலரண்டு விக்கலெடுத்து மீளாதே
மெய்யில் லந்த வையசுரம் விட்டுவிட்டதான் வெதும்பிக்
கையுங் காலுமே வெதும்பிக் கன்னாங்காயு நெஞ்சிடிக்கும்
உய்யு முழலை வாந்தியுண்டோ மோடியோடிக் கட்டும்
தையம் பிழைப்ப தரிதுண்டா யதிக மாகுஞ்ச் சுரந்தானே".

- பாலவாகடம்

பொருள் :

வயிறு பொருமுதல், கண்கள் வெளுத்தல், கையும் காலும் சோர்தல், கண்கள் குழிதல், விடாச் சுரங்காய்தல் இவைகளால் தோடமானாற் போல உடலும் நாக்கும் வரளுதல், விக்கலுண்டாதல் ஆகிய இக்குறிகுணங்கள் காணில் இச்சுரம் ஐய சுரமென்றும் இதனின்றும் பிழைப்பது அரிதெனவும் காண்க.

வேறு குறிகுணம் உண்டாகுமெனவும் கூறுவர், ஐய குற்றத்தாலுண்டாகும் சுரத்தில் விட்டு காய்வதுடன் கை,கால் கன்னம் இவ்விடங்களில் வெதும்பிக் காய்தல், மார்பு நோதல், உடல் வலித்தல், வாந்தி காணால், உடலில் இங்குமங்கும் கனத்துக் கட்டிபோற் காணாமல் மறைதல் , சுரத்தின் வேகம் அளவு கடந்து காணல் ஆகிய குறிணங்கள் காணும். இச்சுரம் தீராது.

X.தீரா ஐயசுரம் இயல்பு

"தொலைக்குஞ் சேத்துமக் குணங்கேளிர்
தொண்டை தன்னைப் புகந்திருமும்
மலத்தை வெளுக்கும் வாடாமல்
வருந்தி யங்க மிகவெதுப்பும்
தலத்துக் கிடயுங் கொள்ளாது
தலையைத் தெரிக்கும் தண்ணீராம்

மலத்தை மிகவே போக்கி வைக்கும்
பேசீர் சிலேத்தும சுரமென்றே
தொண்டையில் புகைச்சலுடன் இருமல்
மலத்தை வெளுத்தல் செய்யும்".

அங்கமெல்லாம் வெப்பமடைதல், தலையில் வெட்டுவது போன்ற வலி காணல், உடல் அடிக்கடி வியர்த்தல், படுக்கையில் பொருந்தாமை, இரண்டு கால்கள்,கைகள், கண்கள், நாவை வெளுத்திடும். பாலை விரும்பி மிக்க தொந்தரவுகள் செய்யும்.

XI.நோய் கணிப்பு

சித்த மருத்துவத்தில் நோய் கணிப்பில் பின்வரும் காரணிகள் முக்கிய பங்கு வகிக்கின்றன.

நோயாளியைச் சார்ந்தது

1. உயிர் தாதுக்கள் (முக்குற்றம்)
2. உடல் தாதுக்கள் (உடற் கட்டுகள்)
3. எண்வகைத் தேர்வு

நோயாளியை சாராதது

4. அளவை
5. பொழுது

பெரும்பொழுது : கார், கூதிர், முன்பனி, பின்பனி, இளவேனில், முதுவேனில்.

சிறுபொழுது : வைகறை , விடியல் , ஏற்பாடு , நண்பகல் , மாலை, யாமம்.

ஐவகை நிலங்கள்

குறிஞ்சி, முல்லை , மருதம் , நெய்தல் , பாலை. மேற்கூறிய காரணிகளின் மாறுபாடுகளை ஒன்றுடன் ஒப்பிட்டு நோய் கணிக்கப்படுகிறது.

உயிர் தாதுக்கள்

வாதம்

1. **Vali:**

   Site of vadham in body:

   Abaanan, faeces, idakalai, below the umblical region, spermatic cord, pelvic bones, skin, nerve plexus, joints, hair follicle, muscle, alimentary tract, bones, ear and thighs.

Vadham consists of 10 types

1. **Praanan: (Uyirkaal):**

   This controls knowledge, mind and five sense organs, which are useful for breathing and digestion. In Kabasuram this vayu is affected, due to the presence of cough, expectoration, breathlessness.

2. **Abaaban: (Keezh nokkung kaal):**

   This is responsible for all downward movement such as passing urine, stools, semen, and menstrual flow. Abaanan vayu is affected in kabasuram due to constipation.

3. **Samaanan: (Nadukkaal):**

   This aids in proper digestion and controls other vayus. In kabasuram, this vayu is altered leading to poor appetite and cannot control the other vayus.

4. **Viyaanan: (Paravukaal):**

   This is responsible for all movements of all parts of the body and distribution of saaram. This vayu is affected in kabasuram because of fever and malaise.

5. **Uthaanan: (Mel Nokkung kaal):**

   Responsible for all upward visceral movements such as vomiting and nausea.Then distributes the saaram equally to all tissues.It was affected in kabasuram because saaram cannot be equally distributed. Vomiting and cough also present.

6. **Naagan:**

   Responsible for opening and closure of eye lids and is not affected in kabasuram.

7. **Koorman:**

   Responsible for vision and yawning. It is not affected in kabasuram.

8. **Kirukaran:**

   This is responsible for salivation, nasal secretion, sneeze, cough and maintains the appetite. In Kattu mantham, this vayu is affected because of the presence of cough, running nose and poor appetite present.

9. **Devathatthan:**

   This is responsible for tiredness (Lazziness), anger and emotional expression. This vayu is not affected in kabasuram.

10. **Dhananjeyan:**

    It produces swelling of the body after death. It escapes on the third day after death bursting out of the cranium.

பித்தம்:

Sites of pitham in body:

Pinkalai, praanavayu, urinary bladder, moolakkini, heart, head, umblical region, stomach, sweat, saliva, blood, saaram, eyes and skin.

Pitham consists of 5 types:

1. **Anal pitham:**

   It promotes appetite and helps in digestion. In kaba suram, maximum no of patients complained of poor appetite.

2. **Ranjagam:**

   It gives colour to the blood. In kaba suram, some children have paleness of the conjunctiva and tongue.

3. **Saadhagam:**

   It is important for day today activities with the help of mind and brain. In Kaba suram saadhagam is affected and difficulty to do the routine works properly exist.

4. **Praasagam:**

   It gives complexion to skin. In kaba suram it is normal.

5. **Aalosagam:**

   It brightens eyes and responsible for clear vision. In kaba suram it is normal.

iii. Iyam:

Sites of Kabam in body:

Kabam (or) kapham is located in sammana vayu suzhumunai, sperm, head, tongue, uvula, fat, bone marrow, blood, nose, chest, nerve, bone, brain, large intestine, eyes, joints and also present in throat, stomach and pancreas.

Kabam consists of five types:

1. **Avalambagam:**

   It lies in the lungs. It controls the heart and other four kabams. In kabasuram, it is deranged because patient has cough with expectoration .

2. **Kilethagam:**

   It lies in the stomach and gives moisture to food material and also helps for digestion. In this disease, it is affected because of poor appetite present in children.

3. **Pothagam:**

   It lies in tongue and responsible for taste sensation. It is affected in kabasuram due to nausea and bitter taste.

4. **Tharpagam:**

   It is present in the head and responsible for coolness of both eyes. It is affected in kabasuram due to burning sensation due to raised temperature.

5. **Santheegam:**

   It is present in joints. Responsible for lubrication and free movements of joints. In kabasuram it is affected because children have arthralgia.

PINIYARI MURAIMAI: (DIAGNOSIS)

Piniyari muraimai is a method of diagnosing a disease. The way of diagnosis is very important to the physician who deal the disease, because of that only he or she can pont out the cause of disease.

Siddha system has a very unique method for diagnosis. This is based upon three principles.

1. Poriyaal arithal (Inspection)
2. Pulanaal arithal (Palpation)
3. Vinaathal (Interrogation)

I. Poriyaal arithal:

Porigal means the five sense organs. These are eyes, ears, nose, tongue and skin. Poriyaal arithal is examining the five sense organ of the patient by the five sense organ of the physician.

In kabasuram,

Mei (skin)	-	Normal
Vaai (Tongue)	-	Normal
Kann (Eye)	-	Normal
Mookku (Nose)	-	Normal
Sevi (Ear)	-	Normal

II. Pulanaal arithal:

Pulan means sense of perception from the five sense ongans.That means understanding by the sense objects.

In kabasuram,

Ooru (sensation)	-	Normal
Oosai (sound)	-	Normal
Oli (vision)	-	Normal
Suvai (Taste)	-	Nausea and bitter taste.
Naatram (smell)	-	Normal

III. Vinaathal:

Vinaathal means, the physician knows about the patients name, age, occupation, family history, socio-economic status, diet and habits, complaints, relevant to disease in his family by asking questions

Ezhu udar kattugal and Ennvagai thervugal also used for diagnosis a disease in Siddha system

Ezhu udar kattugal:

1. Saaram
2. Senneer
3. Oonn
4. Kozhuppu
5. Enbu
6. Moolai
7. Sukkilam/suronitham

When the seven udar kattugal increase or decrease from the normal level, the normal functions of the body will be affected.

In kabasuram,

1. Saaram :Deranged due to poor appetite causing tiredness.
2. Senneer :Deranged in some patient with nutritional anemia.
3. Oonn : Normal
4. Kozhuppu:Normal
5. Enbu :Normal
6. Moolai : Normal.
7. Sukkilam/Suronitham:-

Ennvagaai thervugal: Eight tools of diagnosis

Envagai thervugal is the basic diagnostic principles and the uniqueness of the siddha system of medicine. The following lines are said about this.

The diagnostic value of Enn vagai thervugal is specific to siddha system of medicine.

Enn vagai thervugal are:

1. Naadi (Uyir thathu)
2. Sparisam (Touch feel sensation)
3. Naa (Tongue)
4. Niram (Colour of the skin)
5. Mozhi (Quality and character of speech)

6. Vizhi (Eye)
7. Malam (Stools)
8. Moothiram (Urine)

1. **Naadi (Uyir thathu)**

Otherwise known as uyir thathu, is the principle method for diagnosis in Siddha system. The naadi indicates the status of the body thathus and the body is normal or abnormal. It is responsible for existence of life in the physical body

Naadi nadai in kabasuram:

The prime factor, kabam is involved in kabasuram and is accompanied with vitiated pitham , vatham and produce clinical symptoms of kabasuram.This said by Theraiyar as,

நாடிநடை

"வாதகப நாடி ஐயநாடி கபபித்தநாடி
ஐயசுரத்தினை தொடரும்நோய்".

2. **Sparisam: (Touch feel sensation)**

Identify the heat or coldness of the body, pain and skin nature (soft or hard) In kabasuram,it may be hot due to fever.

3. **Naa: (Tongue)**

It is noted for colour of the tongue local lesion (ulceration, redness), coating deposition of tongue and dryness of the tongue. In kabasuram, some patient has coated and pale tongue.

4. **Niram: (Colour of skin):**

Colour of skin, conjunctiva, teeth, tongue, nail bud and hair are noted.In kabasuram no abnormalities found in skin.

5. **Mozhi : (Quality and character of speech):**

Observation of speech and voice. No abnormalities found in kabasuram.

6. **Vizhi : (Eye)**

By this examination, colour of eye (redness, pallor) protrusion, tears, excreta of eye, disease of eyes are noted.

In kabasuram, the eyes may be red in some patients. Same patients have pallor of lower eyelid due to nutritional anemia.

7. Malam : (stools)

Consistency of stool will be hard pellets like, smell, decreased frequency of defeacation, constipation,lesser quantity of stool are noted.

In Kabasuram, patient have specific symptom constipation.

8. Moothiram : (Urine)

Colour of urine (yellow, black, white copper colour, mixed colour. Then smell of urine (smell of fire, honey, sweet odours, fruity odour) frothy or not, decreasesd frequency of urination and quantity of urine are noted.

Neer nira kuri and Nei kuri:

This urine examination is unique in Siddha system of Medicine.

Collection of sample urine:-

The patient must take well cooked food in the previous day. Food intake should be taken at correct time and avoid excessive intake. The urine is collected on the dawn of the next day in a pure glass container and closed immediately to prevent contamination. This specimen must be examined with in one and half hours of from the collection.

நீர்க்குறி:

"வந்த நீர்கரி யெடை மணம் நுரை எஞ்சலென்
யைந்தியலுளவை யறைகுது முறையே"

-நோய் நாடல் முதல் பாகம்

நீரில் நிறம், மணம், நுரை, எடை, எஞ்சல் ஆகியவற்றை நோக்க வேண்டும்.

In Kabasuram, there is specific feature i.e yellowish in colour of urine.

Neikuri:

A drop of gingelly oil is dropped on a wide glass vessel containing the urine to be tested which is kept under sunlight in a calm place. The derangement of three dhoshas can be diagnosed by the mode of spread of gingelly oil on the surface of urine.

In Kabasuram the results of neikuri is pearl like oil floating on urine in some patients and ring like structure on urine in some patients.

Seasons:

The whole year is constituted by six seasons. They are know as karkalam, koothirkalam, mun pani, pin pani, ilavenil kalam and muthuvenil kalam.

In every season changes will occur in the land, water, plants, animals and human beings, which will modify the physiology and make them susceptible to certain specific diseases which are common in that season.

The incidence of kabasuram is observed in Kaarkalam, koothirkalam, Munpani, Pinpani, Mudhurvenil & Elavenil

Five types of lands:

It is divided into five types

Kurinji	-	Mountain regions and surroundings
Mullai	-	Forest regions and surroundings
Marutham	-	Cultivating regions and surroundings
Neithal	-	Sea coastal regions.
Paalai	-	Desert land only

Most of the suffers of kabasuram belongs to neithal and kurinji.

Udal vanmai - Body immunity:

The udal vanmai is classified into three types. They are:

1. Iyarkai Vanmani
2. Seyarkai Vanmai
3. Kaala Vanmai

Iyarkai Vanmai:

Natural Immunity of the body it self by birth

Seyarkai Vanmai

Improving the health by intake of nutritious food materials, activities and medicines.

Kaala Vanmai

Development of immunity according to use and the environment when udal vanmai is affected there may be a possibility of kabasuram.

MARUTHUVAM:

The treatment in Siddha medicine is aimed at keeping the Mukkutram in the state of equilibrium. i.e,

- Highly vitiated kabam to normal level.
- Vitiated pitham to normal level
- Vitiated vatham due to vitiated kabam to normal level.

  To strengthen the seven udar kattugal and maintains the normal level

Keeping in mind the need for bringing out an effective therapy for Kabasuram from Siddha system of Medicine, the author has undergone this dissertation work with Lavangadhi Kuligai.

Line of treatment:

Siddha treatment is not only for complete healing but also prevention and rejuvenation. Saint Thiruvalluvar says about physicians duty, study the disease, study the cause, treat subsiding way and do what is proper and effect.

"நோய் நாடி நோய் முதல் நாடி அது தணிக்கும்
வாய்நாடி வாய்ப்பச் செயல்".

"உற்றான ளவும் பிணியளவுங் காலமுங்
கற்றான் கருதிச் செயல்".

-திருக்குறள்

So it is essential to know the etiology, the nature of patients, severity of the illness, the seasons and the time of occurrence the disease must be observed clearly.

Line of treatment is as follows:

1. Kaappu (prevention)
2. Neekkam (Treatment)
3. Niraivu (Restoration)

1. Kaappu: (prevention)

Prevention is the main aim of Siddha system. Siddhars have described general preventive measures and special measures.

Especially in Balavagadam, special preventive measures said for prevention of disease of the child. It starts from the conception and goes on the child grows up in intra uterine life and after delivery. ie,Diet of pregnant women, her habits, medicine to take in every month of pregnancy, her psychological conditions and surroundings.

2. Neekkam: (Treatment)

The aim of treatment is based on

- To bring the three thodams into normal equilibrium state.
- To treat the patients according to the symptoms by internal medicine Lavangadhi kuligai.
- Diet restriction.

3..Niraivu: (Restoration)

- Reassurance of disease recovery was given to all patients.
- All the patients are advised to follow the life style that provides a disease free life.

Anupanam in Siddha system :

- Siddha system considers anupanam as an important. It is otherwise known as “Thunai marunthu”, it can be translated as vehicle, adjuvant and supporting to drug therapy. Without anupanam, success in the treatment is mostly not possible.
- In Lavangadhi kuligai anubanam is honey.

Pathiyam (Diet):

During the course of treatment , the drug is administered to the patients according to the nature of disease and the patients were advised to follow certain restrictions regarding diet and physical activities.Importance of pathiyam is quoted as follows.

"பத்தியத்தினாலே பலனுண்டாகும் மருந்து
பத்தியங்கள் போனால் பலன் போகும் பத்தியத்தில்
பத்தியமே வெற்றிதரும் பண்டுதர்க்கு ஆதலினால்
பத்தியமே உத்தியென்று பார்". - தேரையர் வெண்பா

The patient with kabasuram advised to avoid cool drinks , cold water and exposure to chill weather and allergens (dust , pollens and odours). This type of medical advice in Siddha system of medicine is termed as Pathiyam.

Siddhars advice regarding the diet regimen for kaba patients is explained below:

Siddhars advised to avoid certain food items in kaba and pitha noigal.They are given below:

- கத்தரி
- அவரை
- பாகல்
- களா
- அத்திக்காய்
- பீர்க்கங்காய்
- கதலித் தண்டு
- முள்ளங்கி
- கரும்பு
- பூசனிக்காய்
- உள்ளி

"கத்தரி பேய்புடல வரை யிருபாகல் பருங்களா கண்டகாரி
அத்திக் காய்களும் வருக்கைமாபயற்றை கரையால் பீர்க்கரும் -பிஞ்சுவோர் மொய்த்த சூரணங் கதலித் தண்டுகளைப் பூமுளங்கி முருக்கரும்பும்
அத்திப் பூசனிக் காயாருள்ளி வள்ளியுங் கபத்தோர்க் காணமாமே"

"வேளை மணத்தக்காளி மென் சீதை சக்ரவர்த்தி
பீளாய் வசலை சுக்கு பெணுசுணங்கள் - வேளையிலை

செந்தளிர் களைக் கீரை செய்வர் கபதேகர் நிதம்

வந்தனியுணத்தான் மகிழ்ந்து”

-பதார்த்த குண சிந்தாமணி

10. Preventive methods:

The Patients were advised,

- To find which agent makes allergy and to avoid them
- To avoid contaminated food and water
- To avoid cold weather
- To avoid cold food stuffs, beverages etc
- To take highly nutritious diet like vegetable soups to get their immunity developed.

3.2. Kabasuram-Modern aspect

ACUTE BRONCHITIS

Acute bronchitis is a clinical syndrome produced by inflammation of the trachea,bronchi. In children, acute bronchitis usually occurs in association with Viral respiratorytract infection.

1. **Bronchitis**

   Bronchitis means that the tubes that carry air to the Lungs (the bronchial tubes)are inflamed and irritated and it causes the tubes swell and produce mucus.

2. **Two types of Bronchitis:**
   - **a.** Acute Bronchitis
   - **b.** Chronic Bronchitis

3. **Acute Bronchitis**

   Acute bronchitis usually comes on quickly and gets better after 2 to 3 weeks . Most healthy people who get acute bronchitis get better without any problems.

4. **Chronic Bronchitis:**

   History of cough for a long period (3consecutive months in a year for more than 2 successive years) with sputum. Late development of wheeze and breathlessness are present.

EPIDEMOLOGY

According to estimates from national interviews taken by the National Center for Health Statistics in 2006, approximately 9.5 million people, or 4% of the population, were diagnosed with bronchitis. These statistics may underestimate the prevalence of chronic obstructive pulmonary disease by as much as 50%, because many patients under report their symptoms, and their conditions remain undiagnosed.

An overdiagnosis of chronic bronchitis by patients and clinicians has also been suggested, however. The term bronchitis is often used as a common descriptor for a nonspecific and self-limited cough, thereby falsely increasing its incidence even though the patient does not meet the criteria for diagnosis.

In one study, acute bronchitis affected 44 of 1000 adults annually, and 82% of episodes occurred in fall or winter. By way of comparison, 91 million cases of influenza, 66 million cases of the common cold, and 31 million cases of other acute upper respiratory tract infections occurred that year.

Acute bronchitis is common throughout the world and is one of the top 5 reasons for seeking medical care in countries that collect such data. No difference in racial distribution is reported, though bronchitis occurs more frequently in populations with a low socioeconomic status and in people who live in urban and highly industrialized areas.

In terms of gender-specific incidence, bronchitis affects males more than females. Although found in all age groups, acute bronchitis is most frequently diagnosed in children younger than 5 years, whereas chronic bronchitis is more prevalent in people older than 50 years.

ETIOLOGY

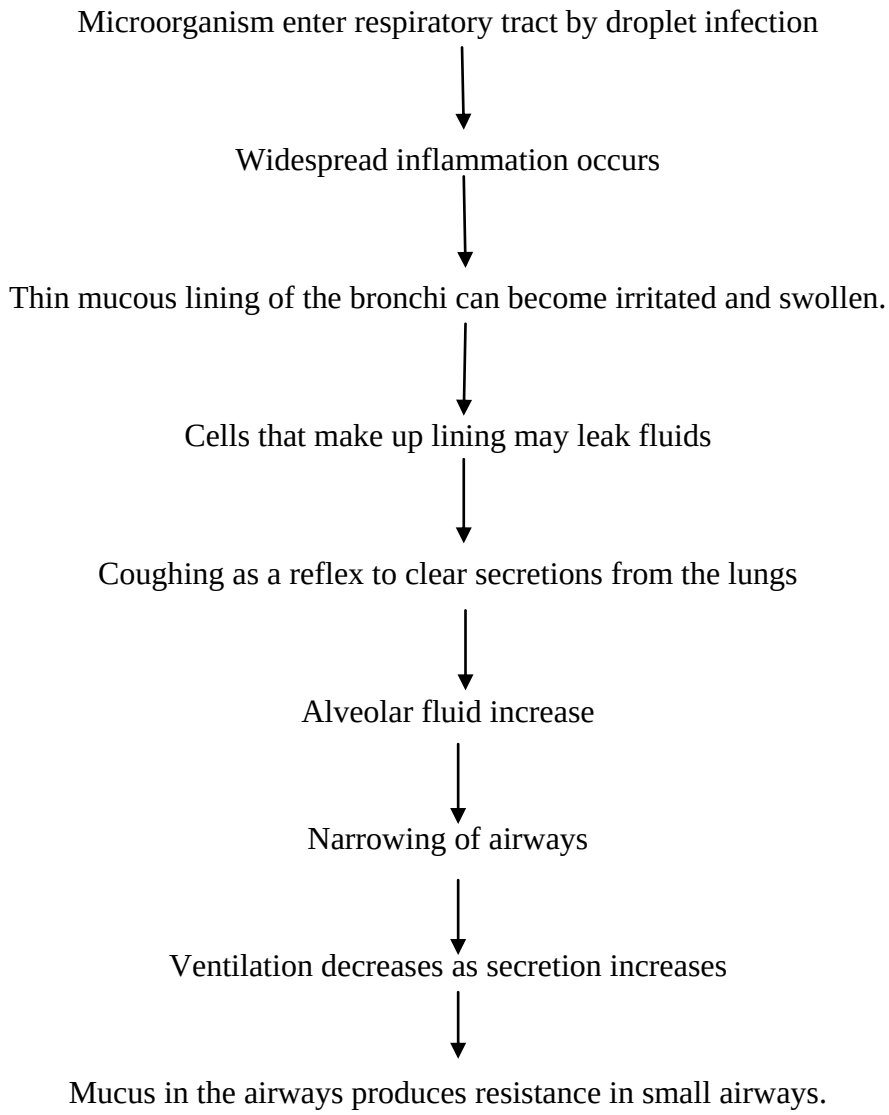
Viral and bacterial infections in acute bronchitis

The most common viruses include influenza A and B, parainfluenza, respiratory syncytial virus, and corona virus, although an etiologic agent is identified only in a minority of cases.[1]

Acute bronchitis is usually caused by infections, such as those caused by *Mycoplasma* species, *Chlamydia pneumoniae, Streptococcus pneumoniae, Moraxella catarrhalis,* and *Haemophilus influenzae,* and by viruses, such as influenza, parainfluenza, adenovirus, rhinovirus, and respiratory syncytial virus. Exposure to irritants, such as pollution, chemicals, and tobacco smoke, may also cause acute bronchial irritation.

Bordetella pertussis should be considered in children who are incompletely vaccinated, though studies increasingly report this bacterium as the causative agent in adults as well.

PATHOPHYSIOLOGY



Physical examination

Inspection

Shape of the chest bilaterally symmetrical

Respiratory muscles moves with respiration

No mediastinal displacement

No scoliosis and kyphosis

No intercoastal indrawing

No grunting of respiration

No other pulsations

Palpation

Apex beat- left 5^{th} intercostals space half inch medial to the mid clavicular line, Trachea present in the midline

Percussion

- Resonance
- No other thrills
- No other added resonance

Auscultation

- Bilateral entry of air equal on both lung fields
- Decreased intensity of breath sounds
- Wheezing & Widespread Ronchi

Diagnosis

1. The diagnosis of bronchitis is generally clinical, based on the history and findings of the clinical examination
2. Lab investigation
   Raised WBC count
   Nasopharyngeal swab culture for viral infection
   Elevated c reactive protein in bacterial infection
3. Sputum examination
   Presence of neutrophils granulocytes (inflammatory WBC)
   Sputum culture showing pathogenic microorganisms.
4. Radiological investigation
   X ray chest sometimes show hyperinflation of bronchial vessels.

RISK FACTORS IN ACUTE BRONCHITIS

- **Infection:** Acute bronchitis is most often caused by virus, bacteria, yeast, or a fungus.
- **Polluted air:** Acute bronchitis can be caused when child breathes air that has chemical fumes, dust, or pollution.
- **Cigarette smoke:** If you smoke around your child, he may be at higher risk for acute bronchitis.

- **Medical problems:** Child may be more likely to get bronchitis if he has other medical problems. Examples include asthma, frequent swollen tonsils, allergies, or heart problems.
- **Premature birth:** Babies who are premature (born too early) may be at higher risk for bronchitis.

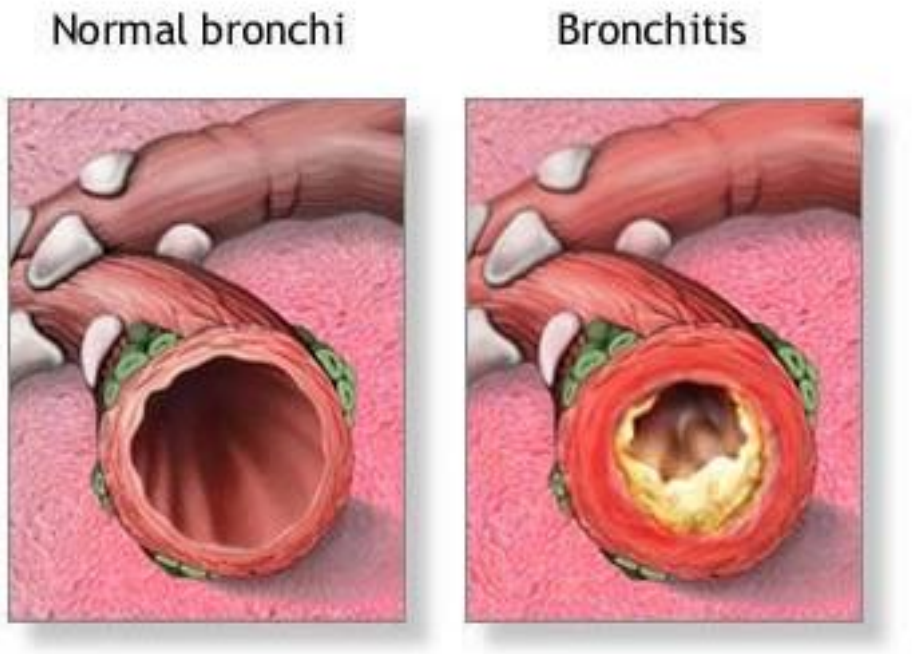
CLINICAL MANIFESTATION

Acute bronchitis often follows a viral upper respiratory tract infection. It is more common in the winter when respiratory viral syndromes predominate. The tracheabronchial epithelium is invaded by the infectious agent, leading to activation of inflammatory cells and release of cytokines. Constitutional symptoms including fever and malaise follow. The tracheabronchial can become significantly damaged or hypersensitized, leading to protracting cough lasting for 1-3 weeks.

The child first presents with nonspecific upper respiratory infectious symptoms, such as rhinitis. Three to four days later, frequent, dry, hacking cough develops, which may or may not be productive. After several days, sputum can become purulent, indicating leukocyte migration but not necessarily bacterial infection. Many children swallow their sputum which can produce emesis. Chest pain may be a prominent complain in older children in older children and is exacerbated by coughing. The mucus gradually thins, within 5 – 10 days, and then the cough gradually abates. The entire episode usally lasts 2 week seldom longer than 3 weeks.

Findings on physical examination varies with the age of patient and stage of disease. Early findings are absent or include low grade fever and respiratory signs such as nasopharyngitis, conjunctivitis and rhinitis. Ascultation of the chest may be un markable at this early phase. As the syndrome progresses and cough worsens, breath sounds become coarse, with coarse and fine crackles and high-pitched wheezing. Chest radiographs are normal or can have increased bronchial markings.

The principal objective of the clinician is to exclude pneumonia, which is more likely caused by bacterial agents requiring antibiotic therapy. Absence of abnormality of vital signs (tachycardia, tachypnea, fever) and a normal physical examination of the reduce the likelyhood of pneumonia.



Complications:

1. Pneumonia
2. Chronic bronchitis
3. Sinusitis
4. Otitis media

DIFFERENTIAL DIAGNOSIS

Persistent or recurrent symptoms should lead the clinician to consider entities other than the bronchitis. Many entities manifest with cough as a prominent symptom.

1. Asthmatic bronchitis
2. Pneumonia
3. Acute bronchiolitis
4. Chronic bronchitis

TREATMENT

There is no specific therapy for bronchitis. The disease is self limited, and antibiotics, although often prescribed, do not hasten improvement. Cough supressants can relieve the symptoms can also increase the risk of suppuration and inspissated secretions and therefore should be used judiciously. Antihistamines dry secretions and are not helpful; expectorant likewise not indicated. Nonprescription cough and cold medicines should not be used in children younger than 2 year of age and their use is cautioned in children age 2 – 11 years.

Pacchai Karpoora Mathirai- Drug Review

According to Siddha literatures, there are more number of formulations described to treat *Kabasuram*, but the chosen trial medicine *Pacchai karpoora mathirai* described in Siddha Literature is not yet scientifically validated. So author has chosen *pacchai karpoora mathirai,* an authenticated Sasthric *Siddha* poly-herbal formulation, which is mentioned in "Balavagadam", to assess its efficacy on the management of *Kabasuram.*

INGREDIENTS OF PACCHAI KARPOORA MATHIRAI:

(Ref BALAVAGADAM PAGE NO ;432 DR.MURUGESA MUTHALIYAR

Pacchaikarpooram (Borneo camphor)

Elavangapattai (Cinnamomum verum)

Sathikai (Myristica fragrans)

Nervalam (Croton tiglium)

Katrazhaisaru (Aloe Vera Juice)

PACCHAI KARPOORAM

Scientific Name	-	*Bornea camphor*
Botanical name	-	*Dryobalanaps aromatic*
Suvai	:	kaippu uppu,seetha veeriyam,viruviruppu
Parts used	:	Gums, resins

குணம்

ஈசனென்னும் பூரவெண்மை யென்பரது காரமுமாம்
பேசரிய சீதமுஷ்ணம் பித்தமயல்-வீசுகின்ற
பீநசமுட் டாகமிவை பேர்த்துவிடுங் காந்தியுண்

டான ததுவசிய மாம்.

ஈசன் என்னும் பச்சைக் கற்பூரம் வெளுப்பு தளதளப்பு காரம் உடையது: கபசுரம் பித்தம் மயக்கம் நாசிநோய் தாகரோகம் போக்கும்.வசியத்துக்காகும்.

Chemical constituents:

- Alpha viniferin
- Ampelopsin E
- Bergenin
- Borneal
- Camphor
- Diptoindon
- Laevifonal
- Malaiysianol A
- Oleanolic acid

Medicinal Uses:

Carbuncle,Constipation,Cough,Dysuria,Eyediseases,Heartdiseases,Insomnia,Sore throat,Scabies.

It cure Kabasuram and vatha disease

Its effects on the body include tachycardia (increased heart rate), vasodilation in skin (flushing), slower breathing, reduced appetite, increased secretions and excretions such as perspiration, diuretic.

Pharmacological action:

- Analgesic
- Antidepressant
- Antipyretic
- Anti-inflammatory
- Antiseptic
- Carminative
- Diuretic
- Febrifuge
- Stimulant

Gunapadam-Thathu vaguppu

The Reputed Antipyretic Action of Camphor.ELDON M. BOYD, AND KATHLEEN G. W. SEYMOUR.From the Department of Pharmacology, Queen's University, Kingston, Canada

ELAVANGA PATTAI

Botanical Name	:	Cinnamomum verum
English Name	:	Bark of Cinnamon
Suvai	:	kaaramum enippum
Thanmai	:	Thatppam
Pirivu	:	Enippu(kaarppu)
Parts Used	:	Pattai
Family	:	Lauraceae

குணம்

தாதுநட்டம் பேதிசருவவிஷம் ஆகியநோய்
பூதகிர கஞ்சிலந்திப் புச்சிவிடஞ்-சாதிவிடம்
ஆட்டுமிரைப் போடுமிருமல் ஆகியநோய்க் கூட்டமற
ஓட்டுமிலவங்கத் துரி.

பாம்புக்கடி சிலந்திப் பூச்சிக்கடி முதலிய நஞ்சுகள் போகும். இரைப்பு, இருமல் வயிற்றுக்கடுப்பு போக்கும்.

(அகத்தியர் குணவாகடம்)

Chemical Constituents

- Cinnamaldehyde
- Eugenol

- Alpha-pinene
- Limonene
- 1,8 cineole
- Linalool
- Beeta- cayophyllene
- Cinnamyl alcohol
- Cinnamyl acetate
- Benzyl benzoate

Medicinal Uses:

Leaf oil cure Cough, Cold, Malaise, Toothache, Stimulant, Carminative, Aphrodisiac.Cinnamomum oil Carminative and powerful stimulant, germicide and an active fungicide.

Pharmacological actions

- Hepato Protective activity
- Antibacterial activity
- Anti-ulcer
- Anti-microbial
- Anti-diabetic
- Anti-inflammatory

Surveys on Indian therapeutic plants :vol.6
Journal of Advanced scientific Research J-Adv.Sci Res,2010,1(2);19-23
Gunapadam-Muthal pagam-Siddha Material Medica
The Wealth Of India

SATHIKKAI

Botanical Name	:	Myristica fragrans
English Name	:	Nut Meg
Suvai	:	Thuvarppu,Karppu
Thanmai	:	Veppam
Pirivu	:	Kaarppu
Parts used	:	Kai
Family	:	Myristicaceae

குணம்

தாதுநட்டம் பேதிசருவாசி யஞ்சிரநோய்
ஓதுசுவா சங்காசம் உட்கிரணி-வேதோ
டீலக்காய் வரும்பிணிபோம் ஏற்றமயல் பித்தங்
குலக்காய் யருந்துவர்க்குக் கூறு.

விந்துகுறைவு பெருங்கழிச்சல் வாயுவினாலுண்டாகும் நோய் தலைவலி இரைப்பு இருமல் நாட்பட்டகழிச்சல் வயிற்றுவலி வயிற்றுப்பொருமல் அக்கினிமந்தம் போம்.

Chemical Constituents

- Myristicine
- Licarin-B
- Dehydrodi iso eugenol
- Beta-allyl type phenyl-propanoid

Medicinal Uses:

Indigestion, liver ailments, anaemia, ascities, piles, infantile diarrhoea, spermatorrhoea and dropsy.

Nutmeg is reported to be an expectorant Stimulant, Carminative, Narcotic, Aromatic Aphrodisiac, Tonic, and nervine tonic used by pcychiatrist.

Aqueous extract of nutmeg is reported to show anti-secretory activity.

Pharmacological actions :

- Anti-secretory activitry
- Neurological activity
- Anti inflammatory activity
- Anti microbial activity
- Expectorant
- Vermifuge
- Mutagenic activity

Nutmeg oil

Anti oxidant activity

Diary of Genetic Engineering and Biotechnology Volume 11, Issue 1, June 2013, Pages 25–31

Gunapadam-Muthal pagam-Siddha Material Medica

The Wealth Of India

NERVALAM

Botonical Name	:	Croton tiglium
English Name	:	Purging croton
Suvai	:	Vegutaludan koodiya kaippu
Thanmai	:	Veppam
Pirivu	:	Kaarppu
Parts Used	:	Vithai
Family	:	Euphorbiaceae

குணம்

ஏந்த வியாதி யினங்களையுஞ் சாடிமல
பந்த வினையைப் பரிபத்து-வந்தவெப்பை
பாபியென மாட்டுதலால் பாடாண வெம்மையினும்
சோபிமக சோபியென்று சொல்
மலத்தை வெளிப்படுத்தி நோய்களைப் போக்கும் (தேரன் வெண்பா)

Chemical constituents:

- Croton oil
- Croton globulin
- Croton albumin

Croton oil :

- Crotonoleic acid
- Tiglinic acid
- Crotonoside

Medicinal Uses:

Plants is used in the treatment of various ailments in developing countries such as wound healing, Constipation, a purgative,dyspepsia and also as analgesic, antimicrobial,insecticidal and anti inflammatory.

The seed the source of croton oil,is used in traditional chinese medicine as a purgative and in apoplexy,paralysis,throat infections,toothache,schistosomiasis and scabies.

Pharmacological activity

- Analgesic activity
- Anti microbial activity
- Insecticidal activity
- Anti inflammatory activity
- Anti tumour activity
- Anti-HIV activity
- Gastrointestinal activity

Antitumor activity

Phorbol esters show in croton tiglium are notable powerful tumor advancing specialist however it ought to be said that there are numerous phorbolesters that display significant useful organic impacts without creating tumorigenesis.

Internatoinal Journal of current Research in Biosciences and Plant Biology-ISSN:2349-8080 Volume 2 Number 7(july-2015)pp.124-128

Gunapadam-Muthal pagam-Siddha Material Medica

The Wealth of India

KATRAZHAI SARU

Botanical Name	:	Aloe vera
English Name	:	IndianAloes,Curacao aloe
Suvai	:	Sirukaippu
Thanmai	:	Thatppam
Pirivu	:	Enippu
Parts Used	:	Saaru
Family	:	Liliaceae

குணம்

வற்றாக் குமரிதன்னை வற்றலென வுண்ணினுஞ்சீர்
முற்றாக் குமரியென மூளுமே-நற்றாக்குந்
திண்மையு மல்லாத் தெரிவையமேயானாலுந்
முண்மைமிகு நூறாம் ஆயுள்

(தேரன் வெண்பா)

கற்றாழையை உலர்த்தி முறைப்படி பொடியாகச் செய்து உண்ணில் பொழுதும் இளமையாக வன்மையுடன் நூறாண்டு வாழலாம்.

Active components with its properties:

Vitamins:

- Vitamin –A(Beta-carotene)
- Vit-C,and E
- Vit-B12,Follic acid and choline

Enzymes

- Aliiase
- AlkalinePhosphatase
- Amylase
- Bradykinase
- Carboxypeptidase
- Catalase
- Cellulase
- Lipase
- Peroxidase

Minerals

- Calcium
- Chromium
- Copper
- Selenium
- Manganese
- Potssium
- Sodium
- Zinc
- Fatty acids
- Cholesterol
- Campesterol
- Beeta—sisosterol
- Lupeol

Anthraquinones:

- Aloin
- Emodin both are act as analgesics,anti bacterial and anti viral

Hormones

- Auxins
- Gibberellines that help in wound healing and anti inflammatory action

Medicinal Uses:

- Tonic, Alterative, Purgative, Emmenogouge.
- The juice of leves is reported to be used for treating gonorrhea
- Extract of the leaves is used for treating obstruction of the lymphatic system,arthritis, and myopathies.
- The phenolic and non phenolic fractions of the leaf extract showed antimicrobial activity comparable to standard antibiotics such as neomycin,tetracyclin and co-trimoxazole.
- Gunapadam-Muthal pagam-Siddha Material Medica
- The Wealth Of India

Pharmacological activity

- Wound healing activity
- Anti septic activity
- Laxative effect
- Anti viral activity
- Antitumour activity
- Anti-inflammatory activity

Anti-inflammatory action: Aloe vera hinders the cyclo oxygenase pathway and diminishes prostaglandin E2 creation from arachidonic corrosive. As of late, the novel mitigating compound called C-glucosylchromone was disengaged from gel extracts.

Laxative effects: Anthraquinones exhibit in latex are a strong diuretic. It increments intestinal water content, animates bodily fluid emission and increments intestinal peristalsis.

Indian J Dermatol 2008; 53(4): 163–166.doi:10.4103/0019-5154.4478510

5.MATERIALS AND METHODS

PREPARATION OF THE TRIAL DRUG PACCHAI KARPOORA MATHIRAI

INGREDIENTS:

The test drug Pacchai Karpoora Mathirai was prepared in Gunapadam lab, National Institute of Siddha, Chennai-47.

(BALAVAGADAM PAGE NO;434 DR.MURUGESA MUTHALIYAR)

Pacchai karpooram(Borneo camphor)	-	2 Kazhanchu (10gm)
Elavanga pattai (Cinnamomum verum)	-	2 Kazhanchu (10gm)
Saathikkai (Myristica fragrans)	-	2 Kazhanchu (10gm)
Nervalam (Croton tiglium)	-	6 Kazhanchu (30gm)
Katrazhai saaru (Aloe vera juice)	-	Required amount

SOURCE OF TRIAL MEDICINE

The required drugs were purchased from a raw drug shop and raw drugs were authenticated by the medicinal botanist in National Institue of Siddha. The drugs were purified and medicine was prepared in Gunapadam laboratory of National institute of Siddha. The prepared medicine was also authenticated by the Head of the Department of Gunapadam for its completeness.

AUTHENTICATION

The herbal raw drugs were authenticated by the medical botanist, in National Institute of Siddha, Chennai. Pacchai Karpooram (Bornea camphor) was identified and authenticated from dept. of Gunapaadam in National Institute of Siddha, Tambaram Sanatorium Chennai 47.

Method of purification:

PURIFICATION OF PACCHAI KARPOORAM:

It is to be soaked in the juice extracted from sengazhuneer flower for 1 nazhigai(24 mins) and then dried.

[Ref: Sikitcha Rathina deepam pg no .36]

PURIFICATION OF ELAVANGAPATTAI:

Dried in moon light.

[Ref: Sikitcha Rathina deepam page no 32]

PURIFICATION OF SATHIKKAI :

The skin is peeled off and cut into small pieces and dried in sunlight.

[Ref:Sikitcha Rathina deepam page no 29]

PURIFICATION OF NERVALAM :

The seeds are to be cooked in the extract of buffalo dung and washed. Then it is cut into two halves, the skin is peeled off and the sprout like inner part are removed. Then place it and tie in a cloth tied loosely and kept cooked in raw rice, remove it when the rice is completely cooked. Repeat the procedure once again.Then the seeds are boiled in milk washed and dried. Finally the seeds are fried in the castor oil coated bowl and stored.

[Ref;Sikitcha Rathina deepam page no 33]

PURIFICATION OF KATRAZHAI:

The skin is peeled off and washed with running water for 7times

Method of preparation:

The above mentioned first 3 drugs each of 2 kazhanchu(10gms) is grinded along with the juice of aloevera for about 4 samam (12 hours) and then with nervalam. Now this is made into a ulunthalavu (65mg) tablet and is dried in the shade and collected

THERAPUTIC DETAILS OF PACCHAI KARPOORA MATHIRAI

Dosage : 1 tablet (ulunthalavu) (65mg) o.i.d for 3 days.

Indication : Kabasuram

Ref : Balavagadam page no 434

Author : K.S.Murugesa muthaliyar,
Maru.pon.Guru Sironmani

DRUG STORAGE;

The trial drug **PACCHAI KARPOORA MATHIRAI** is stored in clean and dry glass container.

DISPENSING:

The PACCCHAI KARPOORA MATHIRAI is given in separate air lock cover

ANALYTICAL STUDIES

PHYSICO CHEMICAL ANALYSIS

The physicochemical analysis of the test drug Pacchai Karpoora Mathirai was carried out as per WHO guidelines **(**Anonymous 1998). The test procedures were done at Central Research Institute, Arumbakkam, Chennai.

1. Determination of Loss on Drying

Place about 10 g of drug (without preliminary drying) after accurately weighing (accurately weighed to within 0.01 g) it in a tared evaporating dish. After placing the above said amount of the drug in the tared evaporating dish dry at 105º for 5 hours, and weigh. Continue the drying and weighing at one hour interval until difference between two successive weighings corresponds to not more than 0.25 per cent. Constant weight is reached when two consecutive weighings after drying for 30 minutes and cooling for 30 minutes in a desiccator, show not more than 0.01 g difference.

2. Determination of Total Ash

Incinerate 2 g accurately weighed, of the drug in a tared silica dish at 450ºC until free from carbon, cool and weigh. If a carbon free ash cannot be obtained in this way, exhaust the charred mass with hot water, collect the residue on an ashless filter paper, incinerate the residue and filter paper, add the filtrate, evaporate to dryness, and ignite at a temperature not exceeding 450ºC. Calculate the percentage of ash with reference to the air-dried drug.

3. Determination of Acid Insoluble Ash

Boil the ash obtained in the above test for 5 minutes with 25 ml of dilute hydrochloric acid repeatedly; collect the insoluble matter on an ashless filter paper, wash with hot water and ignite to constant weight. Calculate the percentage of acid-insoluble ash with reference to the air dried drug.

4. Determination of Alcohol Soluble Extractive

Macerate 5 g of the air dried drug, coarsely powdered, with 100 ml of Alcohol of the specified strength in a closed flask for twenty-four hours, shaking frequently during six hours and allowing to stand for eighteen hours. Filter rapidly, taking precautions against loss of solvent, evaporate 25 ml of the filtrate to dryness in a tared flat bottomed shallow dish, and dry at 105º, to constant weight and weigh. Calculate the percentage of alcohol-soluble extractive with reference to the air-dried drug.

5. Determination of Water Soluble Extractive

Proceed as directed for the determination of Alcohol-soluble extractive, using distilled water instead of ethanol.

6. Determination of pH

Take 10g of sample, add 100 ml of distilled water, stir well and filter. Use the filtrate for the experiment. Switch on the instrument. Give 30 minutes time for warming pH meter. Introduce the pH 4 solution first and adjust the pH meter by using the knob to 4.00 for room temperature 20°C, 4.01 for room temperature 25°C, 4.02 for room temperature 30°C. Introduce the pH 7 solution and adjust the pH meter to 7 by using the knob. Introduce the pH 9.2 solution and check the pH reading without adjusting the knob. Then introduce the sample solution and note the reading. Repeat the test four times and take the average reading as result.

7. Uniformity of Weight

This test is applicable to tablets that contain less than 10 mg or less than 10% w/w of active ingredient. For tablets containing more than one active ingredient carry out the test for each active ingredient that corresponds to the aforementioned conditions. The test for Uniformity of content should be carried out only after the content of active ingredient (s) in pooled sample of the tablets has been shown to be within accepted limits of the stated content.

The test for Uniformity of content is not applicable to tablets containing trace elements. Determine the content of active ingredients (s) in each of 10 tablets taken at random using the method given in the monograph or by any other suitable analytical method. The tablets comply with the test if not more than one of the individual values thus obtained is outside the limits 85 to 115% of the average value and none is outside the

limits 75 to 125% of the average value. If two or three of the individual values are outside the limits 85 to 115% of the average value and none is outside the limits 75 to 125%, repeat the determination using another 20 tablets. The tablets comply with the test if in the total sample of 30 tablets not more than three of the individual values are outside the limits 85 to 115% and none is outside the limits 75 to 125% of the average value.

BIO -CHEMICAL ANALYSIS

The bio-chemical analysis of Pacchai Karpoora Mathirai was done in Biochemistry lab, National Institute of siddha, Chennai-47. Preliminary qualitative phytochemical screening was done by Kolkate (1) method.

Preparation of extract:

5gm of of Pacchai Karpoora Mathirai was weighed accurately and placed in a 250ml clean beaker and 50ml of distilled water was added with it. Then it was boiled well for about 10 minutes. Then it was allowed to cool and filtered in a 100ml volumetric flask and made up to 100ml with distilled water.

- **Test for Calcium :**

  2 ml of extract was taken in a clean test tube. To this add 2 ml of 4% ammonium oxide solution.

- **Test for Sulphate** :

  2 ml of the extract was added to 5 % barium chloride solution.

- **Test for Chloride** :

  The extract was treated with Silver nitrate solution

- **Test for carbonate** :

  The substance was treated with Conc. HCl.

- **Test for Starch** :

  The extract was added with weak iodine solution.

- **Test for Aluminium**:

  To the 2 ml of the extract sodium hydroxide is added in drops to excess.

- **Test for Iron (Ferric)** :

  The extract was treated with glacial acetic acid and potassium ferrocyanide

- **Test for Iron (Ferrous)** :

  The extract was treated with Conc. HNO3 and ammonium thiocynate.

- **Test for Zinc**:

  To 20 ml of the extract sodium hydroxide solution is added in drops to excess.

- **Test for phosphate** :

  The extract was treated with ammonium molybdate and conc. HNO3.

- **Test for Tannic acid** :

  The extract was treated with Ferric chloride

- **Test for Unsaturation** :

  1 ml of Potassium permanganate solution was added to the extract.

- **Test for Magnesium**:

  To 20 ml of the extract sodium hydroxide solution is added in drops to excess.

- **Test for saponins**:

  Dilute extract+ 1ml of distilled water shake well.

- **Test for sugars** :

  Benedict method ; 5ml of Benedict solution heated gently then add 8 drops of diluted extract then heated in a boiling water bath.

  Molisch test; Dilute extract+2 drops of Molisch+3ml conc.H2SO4.

- **Test for amino acids**:

  Dilute extract +2ml of Ninhydrin'ssoln .

- **Test for proteins**:

  Biuret method ; 1ml of dilute extract+1mlof5%CuSO4+1%NaOH.

- **Test for Flavanoids**:

  Dilute extract+ mg bits+2drops of conc.HCl and gently heated.

- **Test for phenol:**

  Dilute extract+2drops of FeCl3 soln.

- **Test for Tannins :**

  Dilute extract +2ml of 10%lead acetate added.

- **Test for alkaloids**;

  Mayer's method;1ml of dilute extract + 1ml reagent. Dragendroff's method; 1ml of dilute extract+ 1ml of reagent.

PHARMACOLOGICAL ACTIVITY STUDY

In-vitro Anti-Inflammatory Activity of Pacchai karpoora mathirai by Protein (Albumin) denaturation Assay

The anti-inflammatory activity of Pacchai Karpoora was studied In-vitro, using albumin denaturation technique. The study was conducted at *Centre* for Lab *Animal*Technology &*Research, Sathyabama University*, Chennai - 600 119.

Albumin Denaturation Assay Procedure

In-vitro anti-inflammatory activity Patchaikarpora mathirai (PKM) was studied using albumin denaturation technique. The reaction mixture consisted of bovine serum albumin (5% aqueous solution) and test sample PKM at varying concentration ranges from 100 to 500 mcg/ml and standard diclofenac sodium at the concentration of100 mcg/ml of final volume. pH was adjusted by using a small amount of 1N Hydrochloric acid. The samples were incubated at 37°C for 20 min and then heated at 57°C for 3 min. After cooling the sample, 2.5 ml of phosphate buffer solution was added into each test tube. Turbidity developed was measured spectrophoto-metrically at 660 nm, for control distilled water was used instead of test sample while product control tests lacked bovine serum albumin. The experiment was performed in triplicate.

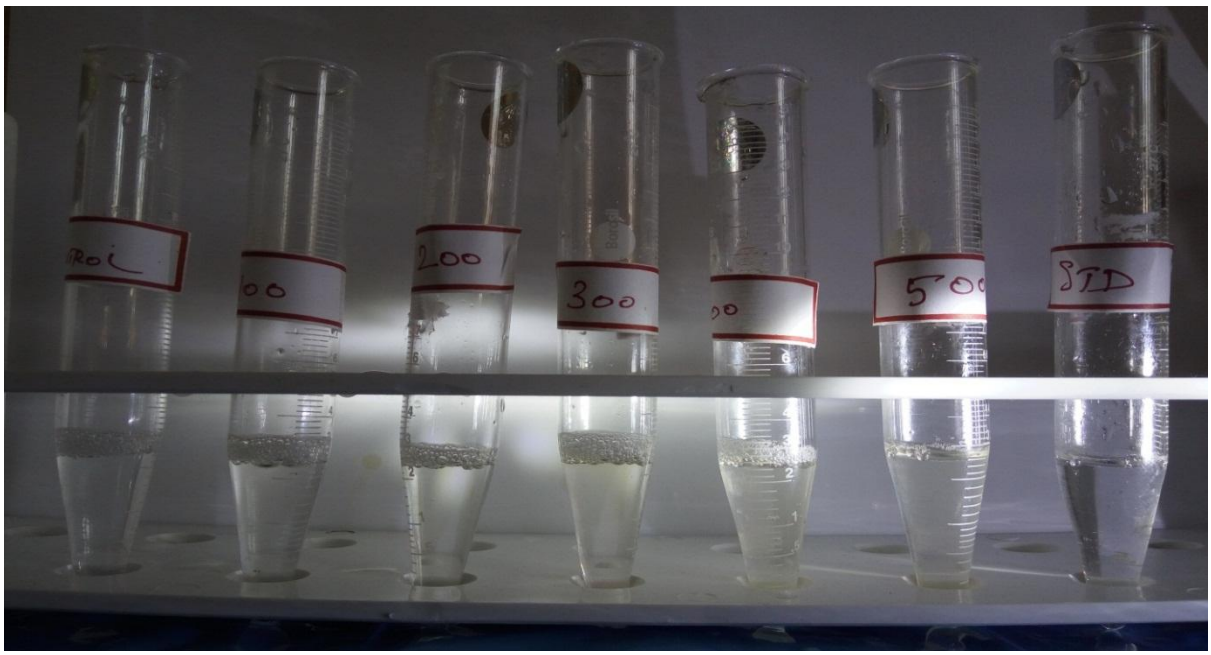
The Percentage protection from denaturation is calculated by using the formulae

$$\left[\frac{(A)_{\text{control}} - (A)_{\text{sample}}}{(A)_{\text{control}}}\right] \times 100.$$

Statistical analysis

Results are expressed as Mean ± SD. The difference between experimental groups was compared by One-Way Analysis Of Variance (ANOVA) followed by Dunnet Multiple comparison test

Preparation of Test and control



CLINICAL TRIAL

METHODOLOGY

STUDY DESIGNS	-	An Open clinical trial
STUDY PLACE	-	Ayothidoss pandithar hospital,NIS
SAMPIE SIZE	-	40 patients,Both male and female
		OPD-30 cases,IPD-10cases
STUDY PERIOD	-	24 months

INCLUSION CRITERIA

a. Age 8 to 12 Years
b. Temperature (99-101F)
c. Difficulty in breathing,
d. Dry or productive cough
e. Constipation
f. Running nose
g. Malaise

EXCLUSION CRITERIA

a. Temp>101F
b. Fever>3 days
c. H/o.Convulsions,Jaundice,Typhoid,Malaria
d. H/o.Active primary complex,Pneumonia,
e. H/oRheumatic fever,Urinary tract infection
f. Patient not willing to give blood sample
g. Patient not willing to give consent for the study

WITHDRAWAL CRITERIA

a. Exacerbation of symptoms
b. Occurrence of any adverse effect
c. Patient turning unwilling during the course of trial drug
d. Patient not willing to give consent for the clinical trial

STUDY ENROLLMENT

In this study, patients reporting at the OPD with the clinical symptoms of fever difficulty in breathing, dry or productive Cough, headache, running nose, constipation, malaise were examined clinically for enrolling in this study based on the inclusion and exclusion criteria.

- The patients who are to be enrolled were informed about the study, trial drug, possible outcomes and the objectives of the study in the language and terms understandable to them.
- After ascertaining the patient's willingness, informed consent (Form II) were obtained in writing from their parents in the consent form.
- All these patients are given unique registration card in which patient' s Registration number of the study, Address, Phone number and Doctors phone number etc were given, so as to report easily if any complications arise.
- Complete clinical history, complaints and duration, examination findings-- all were recorded in the prescribed Proforma in the history and clinical assessment forms separately. Screening Form- I were filled up. Form III, Form –IV and Form –V were used for recording the patient's history, clinical assessment of symptoms and signs and laboratory investigations respectively.
- Patient advised to take the trial drug and appropriate dietary advice were given according to the patient's perfect understanding.

CONDUCT OF THE STUDY:

The trial drug "**pacchai karpoora mathirai**'' is given for 1day. For OP patients, they were asked to attend the OPD on the 3rd day and they were instructed to bring back unconsumed trial drugs and return them during their next visit.For IP patients the drug provided for one day and prognosis was noted on the day of the trial.

DATA MANAGEMENT

- After enrolling the patient in the study, a separate file for each patient were opened and all forms were filed in the file. Study No. and Patient No. were entered on the top of file for easy identification. Whenever study patient visits OPD during the study period, the respective patient file were taken and necessary recordings were made at the assessment form or other suitable form.

- The screening forms were filed separately.

  The Data recordings in all forms were monitored and scrutinized by HOD, Dept of kuzhanthai maruthuvam .Data analysis were done with the help of senior research officer (statistics) of NIS

ADVERSE EFFECT / SERIOUS EFFECT MANAGEMENT

During course of my study no serious cases were reported.

The enrolled patients didn't report any failure or adverse reaction.

ETHICAL ISSUES

1. The data collected from the patient are kept confidentially. The patients were informed about the diagnosis, treatment and follow-up.
2. After the consent of the patient (through consent form) they are enrolled in the study.
3. Informed consent were obtained from the patient explaining in the understandable language to the patient.
4. Treatment is provided free of cost.

ASSESSMENT FORMS

FORM l **SCREENING & SELECTION PROFORMA**

FORM ll **CONSENT FORM**

FORM III **CASE RECORD FORM**

FORM IV **DRUG COMPLIANCE FORM**

FORM V **WITHDRAWAL FORM**

FORMVI **ADVERSE REACTION FORM**

FORMV11 **PHARMACOVIGILENCE FORM**

FORMVIII **DIETARY FORM**

6.RESULTS AND OBSERVATION

1. Results of Analytical studies on Pacchai Karpoora Mathirai

Physico-chemical Analysis shows the results as in table 5.1

Table 6.1.Physico-chemical properties of Pacchai Karpoora Mathirai.

No	Name of the experiment	Values
1.	Loss on drying at 105° C	13.98
2.	a.Total ash	4.15
	b. Acid insoluble ash	0.7
	c.Water soluble ash	2.60
3.	a. Alcohol soluble extract	25.33
	b. Water soluble extract	7.81
4.	pH value(10%)	5.17
5.	Uniformity of weight tablet Average Weight of tablet	0.04
	Lowest Weight of tablet	47.37%
	Highest Weight of tablet	67.5%

2. Bio chemical analysis :

The bio-chemical analysis shows the presence of Carbonate, Aluminium, Zinc, Magnesium.

Table 6.2 In-vitro Anti-Inflammatory Activity of Pacchai karpoora mathirai by Protein (Albumin) denaturation Assay.

FINAL RESULT

Concentration in µg/ml	Absorbance
Control	0.86 ± 0.015
PKM 100	0.58 ± 0.035
PKM 200	0.45 ± 0.030
PKM 300	0.35 ± 0.040
PKM 400	0.25 ± 0.034
PKM 500	0.18 ± 0.02
Diclofenac sodium (100 µg)	0.02 ± 0.01

Each value represents the mean ± SD. N=3

Table 6.3

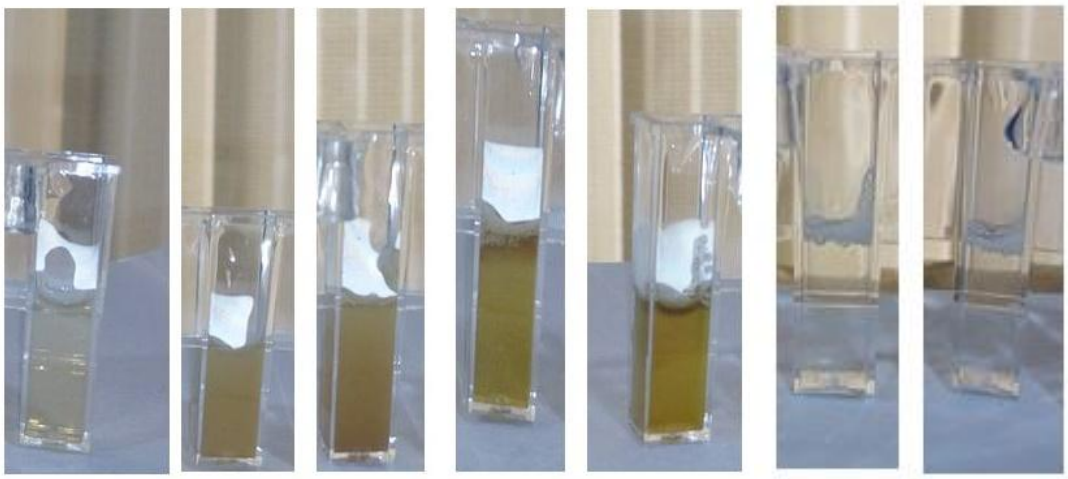
Concentration in µg/ml	Percentage Inhibition of Protein Denaturation
PKM 100	19.43 ± 3.175
PKM 200	34.44 ± 2.118
PKM 300	45.61 ± 2.619
PKM 400	57.82 ± 5.651
PKM 500	65.95 ± 1.715
Diclofenac sodium (100 µg)	84.41 ± 0.5156

Each value represents the mean ± SD. N=3

Result Analysis

The result obtained from the present clearly indicates that the test drug PKM was effective in inhibiting heat induced albumin denaturation. Maximum percentage inhibition of about 65.95 % was observed at 500 µg/ml when compare to that of the Diclofenac sodium, a standard anti-inflammatory agent with the maximum inhibition 84.41 % at the concentration of 100 µg/ml.

Absorbance of reaction mixture



Clinical trial

For the clinical study 40 cases were selected and treated, in which 40 cases were treated in OPD & IPD of National Institute of Siddha. Results were observed with respect to the following criteria

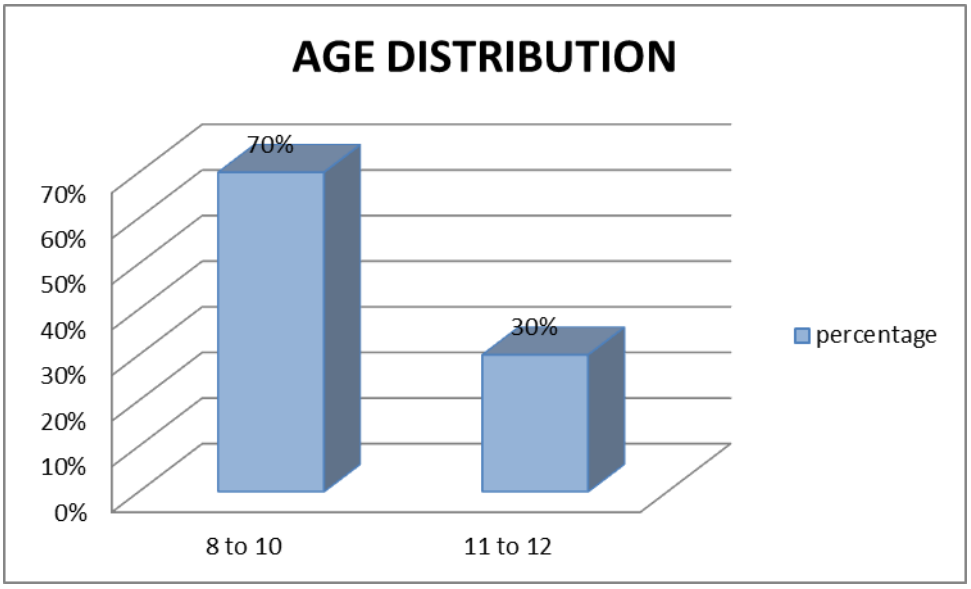
Results were observed with respect to the following criteria:

Age, Sex, Parent's Socio Economic Status, Diet, Religion, Paruvakaalam, Uyirthathukkal, Ezhuudalkattugal, Envagaithervugal, Neikuri, Clinical features, Biochemical Analysis Results.

Table 6.4 - Distributions of patients with kabasuram according to Age Distribution

In my clinical trial about 28 number of cases are in the age group of 8-10 years and 12 number of cases in the age group of 11-12 yrs among 40 cases

Age	No of cases	Percentage
8-10 years	28	70%
11-12years	12	30%
Total	40	100%



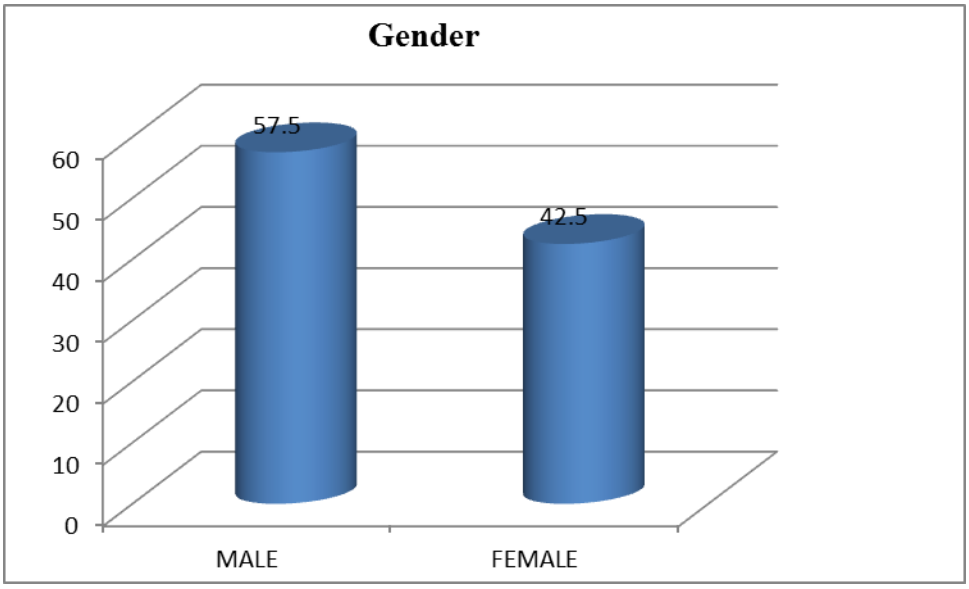
Inference:

Out of 40 patients, 35% of cases were 4-6 years, 30% of cases were 7-9 years, 35% of cases were 10-12.

Table 6.5 - Distributions of patients with kabasuramaccording to Gender Distribution

In my clinical trail about 23 number of cases were Male children and 17 number of cases were Female children among 40 cases

Gender	No of cases	Percentage
Male child	23	57.5%
Female child	17	42.5%
Total	40	100%



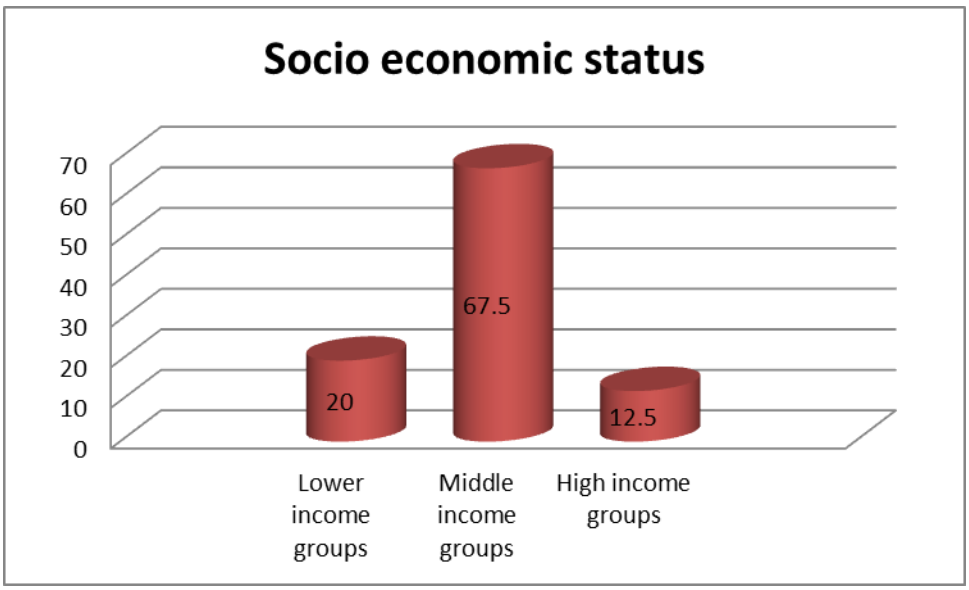
Inference:

Out of 40 patients 57.5% were male children and 42.5% were female children.

Table 6.6 - Distributions of patients with Kabasuram according to Parent's Socio Economic Status

In my clinical trial about 8 number of cases were lower income groups, 27 number of cases were middle income group, 5 number of cases were high income group among 40 cases

Socio Economic Status	No of Patients	Percentage (%)
Lower Income Groups	8	20
Middle Income Group	27	67.5
High Income Group	5	12.5
Total	40	100



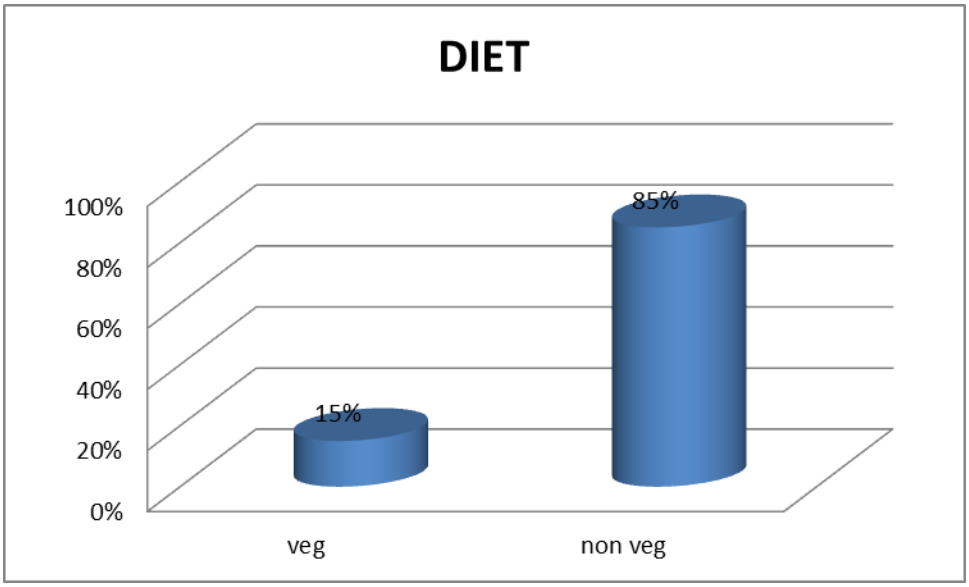
Inference:

About 20% patients were under lower Income Group,67.5 % patients were under middle Income Group and 12.5 % patients were under high Income Group. The highest incidence occurred in middle income Group.

Table 6.7- Distributions of patients with Kabasuram according to Diet

In my clinical trial about 6 number of cases were Vegetarian, 27 number of cases were Non vegetarian, among 40 cases

Diet	No of Cases	Percentage
Vegetarian	6	15%
Non vegetarian	34	85%
Total	40	100 %



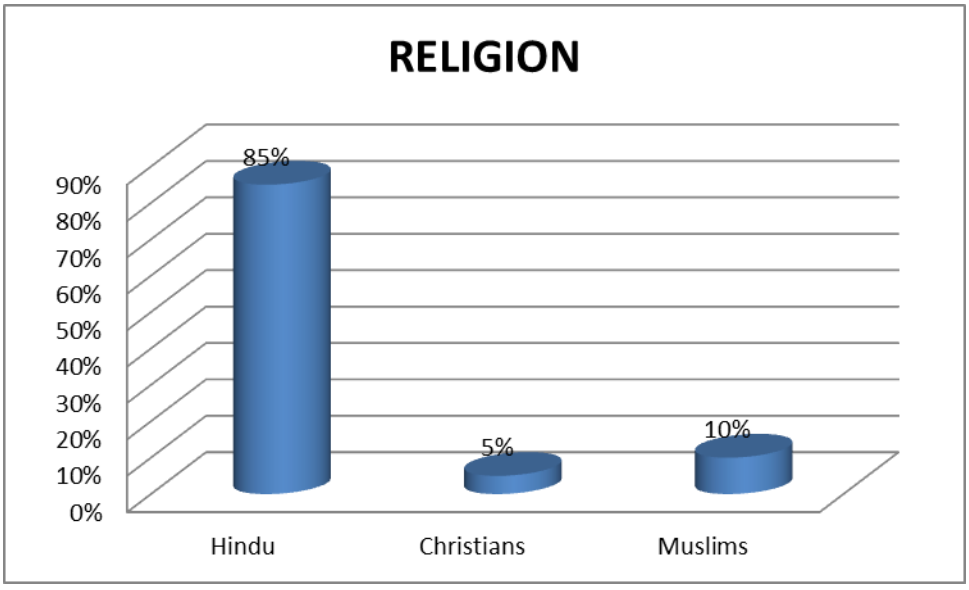
Inference:

According to diet, high incidence of cases 85% was noted in non-vegetarian and in vegetarian 15% cases were noted.

Table 6.8 - Distributions of patients with Kabasuram according to Religion

In my clinical trial about 34 number of cases were Hindu, 2 number of cases were Christians, 4 number of cases were Muslims among 40 cases

Religion	No of Cases	Percentage
Hindu	34	85%
Christians	2	5%
Muslims	4	10%
Total	40	100%



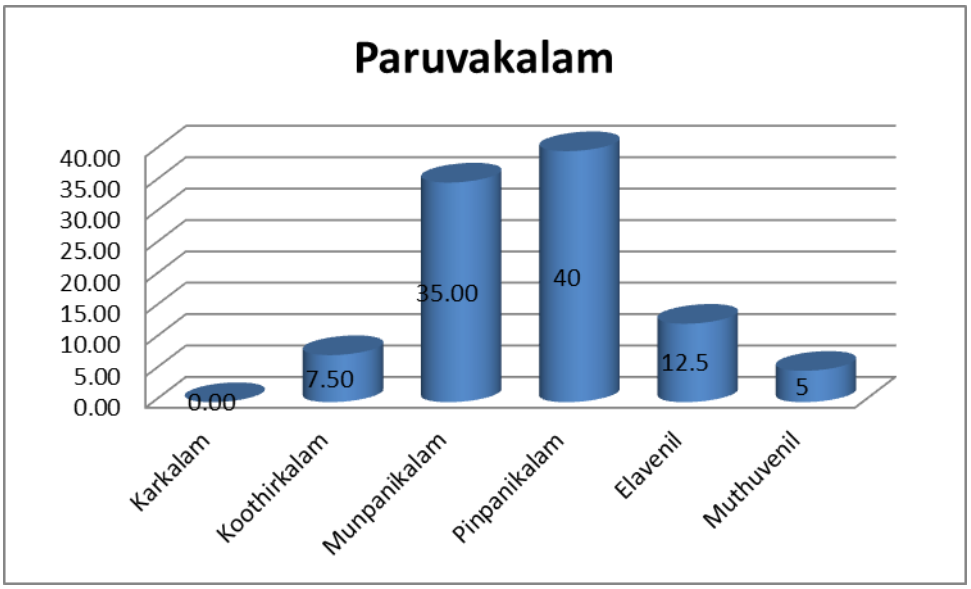
Inference:

According to Religion, high incidence of cases (85%) was noted in Hindu. In Christian was 5 %, and in Muslims 10% cases were noted.

Table – 6.9 – Distributions of Patients with according to the Paruvakalam

The incidence of kabasuram in accordance with various seasons are tabulated as follows

Paruvakaalam	No. of cases	Percentage(%)
Karkalam	0	0%
Koothirkalam	3	7. 5%
Munpanikalam	14	35%
Pin panikalam	16	40%
Ilavenil	5	12.5%
Muthuvenil	2	5%



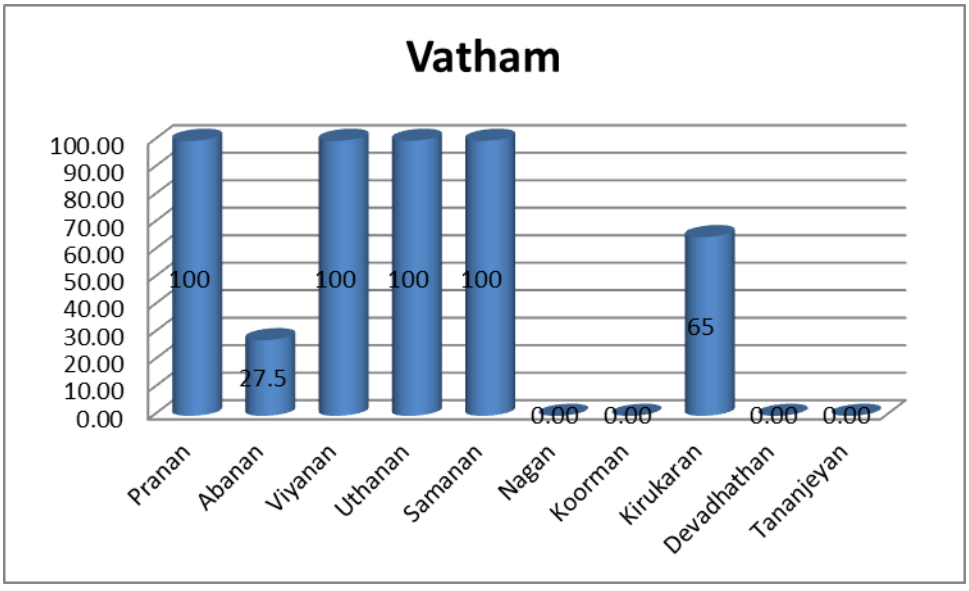
Inference:

According to paruvakaalam, high incidence of cases 35% were noted in munpanikalam, 40% in pinpanikalam ,7.5% were noted in koothirkalam& 12.5% cases were noted in elavenirkalam, 5% were noted in mudhuvenilkalam.

Table. 6.10 a Distribution of patients with kabasuram according to Vali (Vatham)

The types of vatham and its affected functions in the study subjects are given in the following tabular column

Vatham	No. of cases	Percentage(%)
Pranan	40	100
Abanan	12	30
Viyanan	40	100
Uthanan	40	100
Samanan	40	100
Nagaan	0	0
Koorman	0	0
Kirukaran	26	65
Devadhathan	0	0
Danajeyan	0	0



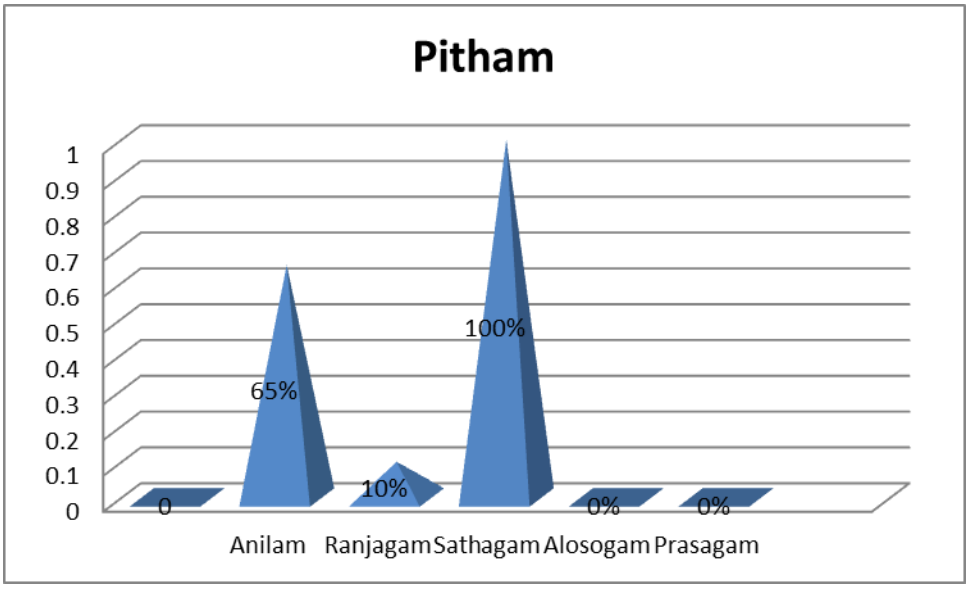
Inference:

According to vadham, derangement of Pranan,Viyanan, Uthanan, Samanan and devathathan were 100%, Abanan was deranged in 27.5%, kirukaran was deranged in 65%.

Table- 6.11.b- Distribution of patients with kabasuram according to Pitham

The types of pitham and its affected functions in the study subjects are given in the following tabular column

Pitham	No. of cases	Percentage(%)
Analam	26	65
Ranjagam	4	10
Sadhagam	40	100
Alosagam	0	0
Prasagam	0	0



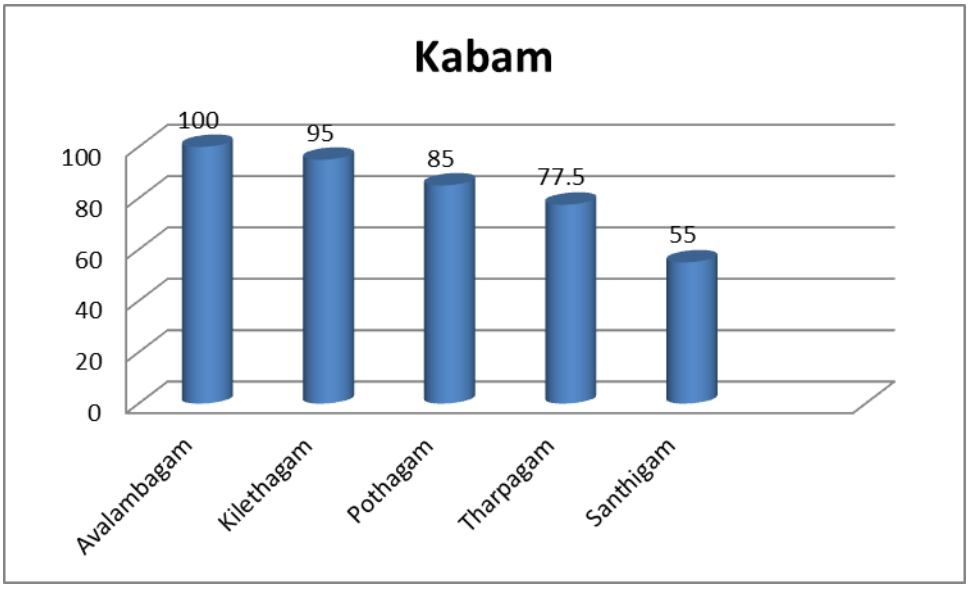
Inference:

According to Pitham, derangement of Analagam, Ranjagam,Sathagam , is 65%,10 % 100% ,.

Table6.12.c- Distribution of patients with kabasuram according to Kabam

The types of kabam and its affected functions in the study subjects are given in the following tabular column

Kabam	No.of cases	Percentage
Avalambagam	40	100
Kilethagam	38	95
Pothagam	34	85
Tharpagam	31	77.5
Sandhigam	22	55



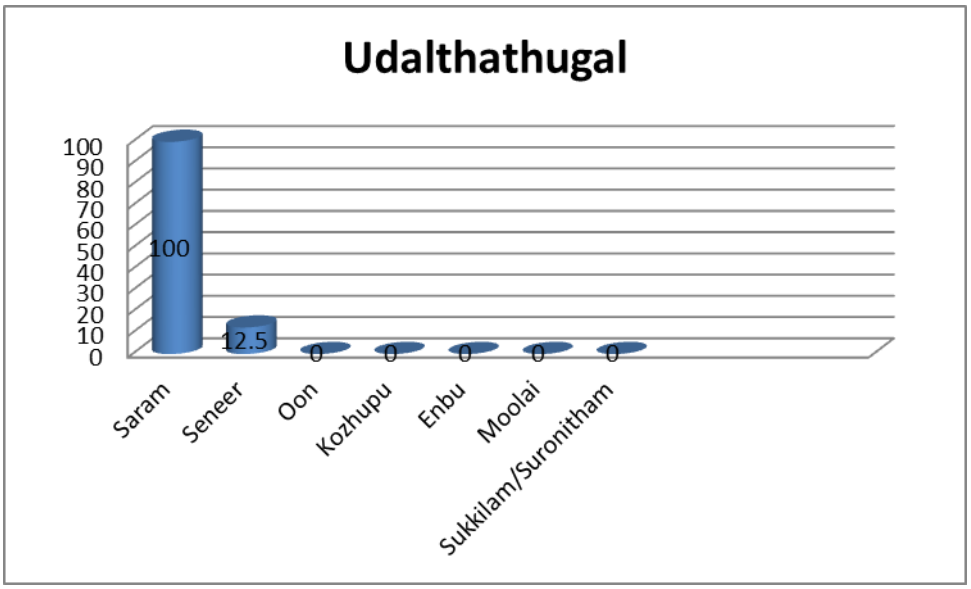
Inference:

According to Kabam, derangement of Avalambagam, kelathagam, pothagam, Tharpagam,Santhigam is 100%, 95%, 85 %, 77.5% and 55%.

Table 6.13-- Distributions of patients with Kabasuram according to Udalthadhugal

In udalthathugal,the following number of cases are showing the changes which are tabulated as follows

Udalthadhugal	No. of cases	Percentage%
Saram	40	100
Seneer	5	12.5
Oon	0	0
Kozhupu	0	0
Enbu	0	0
Moolai	0	0
Sukilam/Suronitham	0	0



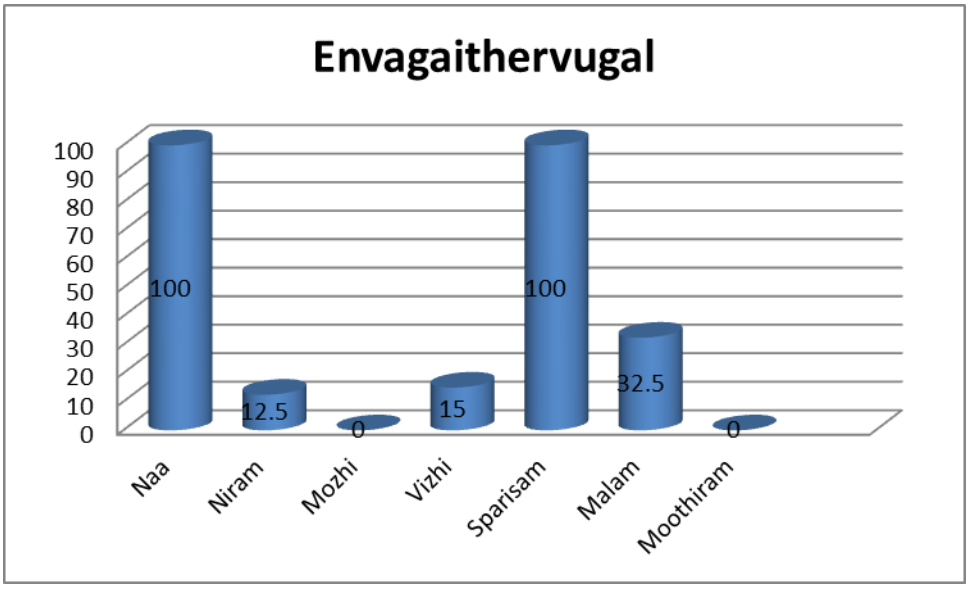
Inference:

Saram was affected in 100% of cases,Senneer was affected in 12.5% of cases.

Table –6.14- Distributions of patients with Kabasuram according to findings the Envagai Thervugal.

In envagaithervugal examinations,the following changes are noted in the subjects which are tabulated as follows

Envagaithervugal	No. of cases	Percentage%
Naa	40	100
Niram	5	12.5
Mozhi	0	0
Vizhi	6	15
Sparisam	40	100
Moothiram	0	0
Malam	13	32.5



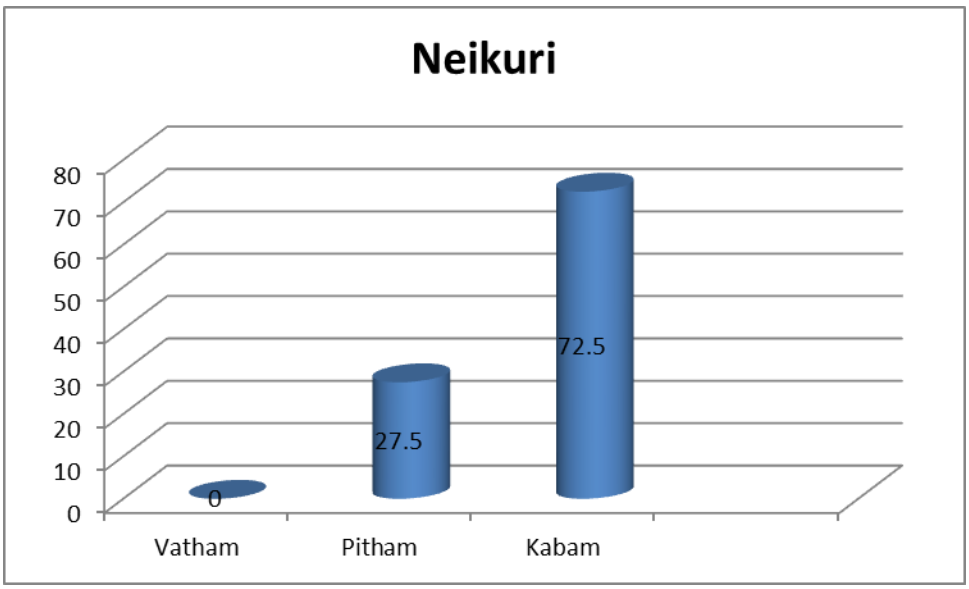
Inference:

Out of 40 cases coated and slightly dried tongues were noted in 100% cases.InNiram, pallor of skin(12.5%) &conjunctiva was observed in 15% of cases. Out of 40 cases, veppam was observed in all 100% of cases.Out of 40 cases, constipation was observed in 32.5% of cases. In Naadi, Vathapitham was observed in 30% of cases, Pithavatham was observed in 40% of cases, Pithakabam was observed in 17.5% of cases, kabapitham was observed in 5%.

Table 6.15 - Distributions of patients with Kabasuram according to the Neikuri

The Neikuri changes in the urine analysis of the study subjects are tabulated as follows

Neikuri	No. of cases	Percentage%
Vadham	0	0
Pitham	11	27.5
Kabam	29	72.5



Interference

According to Neikuri, ,pithaneer was observed in 27.5% of cases, Kabaneer was observed in 72.5% of cases.

Table – 6.16 - Distributions of patients with Kabasuram according to the clinical fea tures

The clinical features of the children in the study are tabulated as follows

Clinical features	No of patients Observed before Treatment	Percentage	No of patients observed after treatment	Percentage
Fever	40	100%	0	0%
Dry or productive cough	37	92.5%	17	42.5%
Running nose	25	62.5%	9	22.5%
Constipation	15	37.5%	1	2.5%
Malaise	39	97.5%	15	37.5%
Breathing difficulty	19	47.5%	6	15%

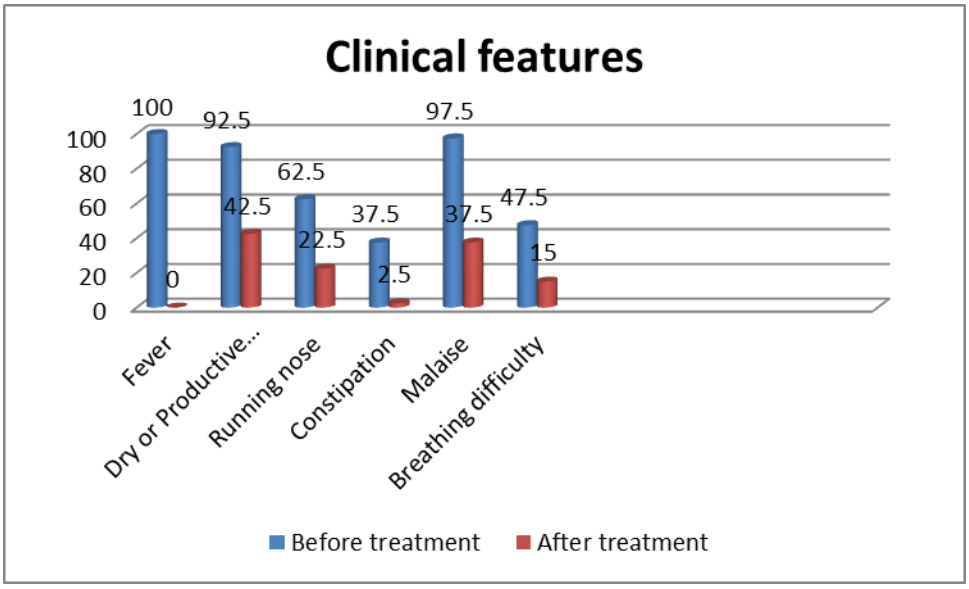
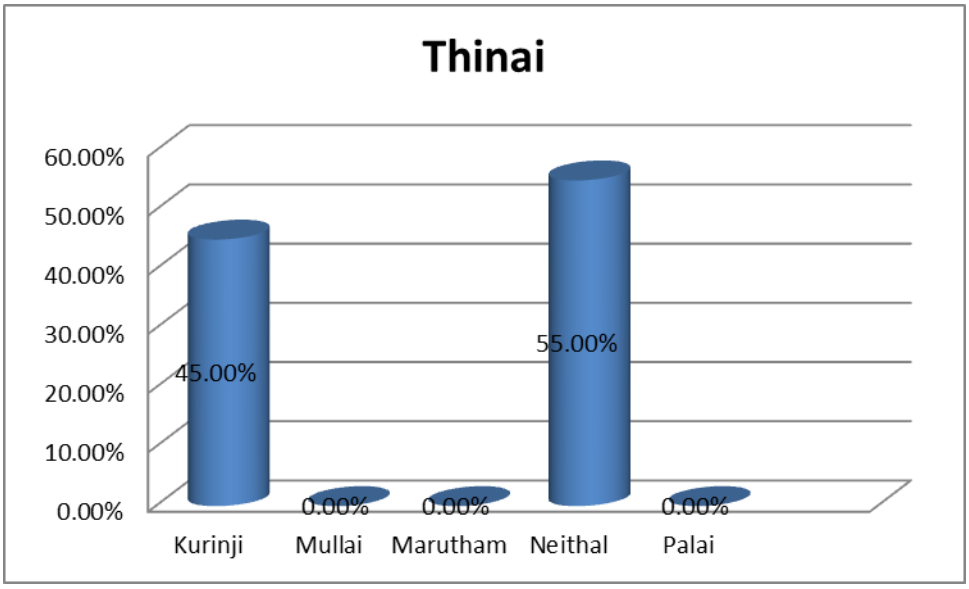


Table – 6.17- Distributions of patients with Kabasuram according to the Thinai

The study patients classified by their locality (thinai) are tabulated follows

Thinai	No. of cases	Percentage%
Kurinji	18	45
Mullai	0	0
Marutham	0	0
Neithal	22	55
Palai	0	0



Interference

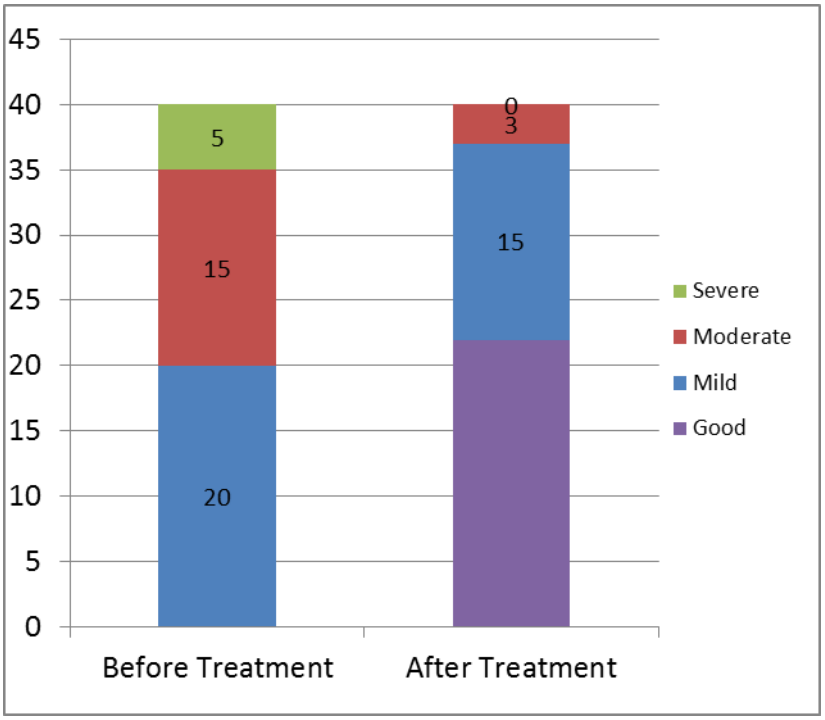
According toThinai, kurinji was observed in 45% of cases, neithal was observed in 55% of cases.

Table 6.18 Kabasuram scoring system

The scoring table for kabasuram patients are categorized as mentioned below

Severity category

Treatment	Good	Mild	Moderate	Severe	Total
Before Treatment	0	20	15	5	40
After Treatment	22	15	3	0	40



Stastical analysis:

All collected data were entered into MS excel software using different columns as variables and rows as patients. STATA software was used to perform statistical analysis. Basic descriptive statistics include frequency distributions and cross- tabulations were performed. Bar diagram, were used to describe the value of different variables for pictorial representation. The quantity variables were expressed as Mean and standard deviation and qualitative data as percentage. A probability value of less than 0.05 was considered to indicate as statistical significance. Paired 't' test was performed for determining the significance between before and after treatment.

Table 6.19 Kabasuram scoring system

S.No		Mean	Std. Deviation	Std. Error Mean
1	Before	4.2750	2.1362	0.3378
2	After	0.9750	1.3865	0.2192

Paired sample test

Table 6.20 Clinical symptom score of Pacchai Karpoora Mathirai

S.No		Paired Difference					t	sig.(2 tailed) P-Value
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval			
					Upper	Lower		
1	before - after	3.3000	2.2555	0.3566	2.5787	4.0213	9.253	0.000

Result:

I. The mean and SD of clinical symptom score of Pacchai Karpoora Mathirai, before and after treatment were 4.2750 ± 2.1362 and 0.9750 ± 1.3865 respectively which is statistically significant.(t – value 9.253, $p < 0.00$).
II. $P<0.05$-reject null hypothesis.
III. There is significance difference betwean before and after treatment
IV. The reduction of clinical symptom is 77% .

6.DISCUSSION

Most children develop an acute respiratory tract infection with fever every year. Kabasuram also the commonest acute problem dealt with primary care. Management of kabasuram in the past concentrated on advising prompt antibiotic treatment of presumptive bacterial infections. After a fall in antibiotic use in the late 1990s, antibiotic prescribing in India has now reached a plateau and the rate is still considerably higher than the rates of prescribing in other countries. Most people presenting in primary care with an acute uncomplicated respiratory infections will still receive an antibiotic prescription is a most common infectious disease of respiratory tract of childhood. Kabasuram more or less resembles Acute Bronchitis in modern literature. The disease is characterized by fever, cough, with or without expectoration, constipation, malaise and polyarthralgia. In the present study, forty cases were treated in the outpatient department, according to clinical features mentioned in textbook of Balavagadam.The diagnosis were confirmed and treated with the drug Pacchai Karpoora Mathirai. The diagnosis is based on clinical observation,Kabasuram scoring system and temperature can also be measured in the under axilla are the taken as the prognostic tool to evaluate the efficacy of the trial drug.

Physico-chemical analysis was done as preliminary evaluation on Pacchai Karpoora Mathirai. The method of measuring the moisture content in solid or semi-solid materials is loss on drying (LOD).Low moisture content is always desirable for higher stability of drugs.In Pacchai Karpoora Mathirai, the loss on drying at $105^{o}C$ was found to be 13.98%, it falls in between the limit range (1-20%).So the determination of moisture content shows the good stability of the drug Pacchai Karpoora Mathirai.

The ash values represent the purity of the drugs. The *total ash* includes both "physiological ash", which is derived from the organic matter, and "non-physiological" ash, which is the residue of the extraneous matters like sand/soil, inorganic materials.The non-physiological ash is represented by *acid insoluble ash.*The total ash in Pacchai Karpoora Mathirai found to be 4.15%, and the acid insoluble ash to be 0.7%. The both ash value were under limits.The minimal level of *acid insoluble ash* shows the less inorganic residue and purity of the drug Pacchai Karpoora Mathirai.

The extractive values helps to indicate the nature of chemical constituents present in the drug. The water soluble substance is polar in nature and the alcohol has the ability to dissolve non-polar substance.The water soluble extrat value of Pacchai Karpoora Mathirai is 7.81% and the Alcohol soluble extractive is 25.33%, it shows the possibility of water soluble constituents such as tannins,sugars, plant acids and mucilage, and alcohol soluble substance such as tannins, resins and alkaloids to be present in the drug. As the drug Pacchai Karpoora Mathirai having more alcohol soluble constituents than watersoluble, it would be non-polar. So the drug will show good absorption &intracellular distribution without possible of accumulation inside the cells. The poor water solubility may prolong the duration of the drug action.

Strongly Acidic nature of the drug can cause the harmful effects to the body, so the screening for the pH is important for drugs. It represents the chemical nature of the drug and the site of absorption of non-polar drug.The pH of Pacchai Karpoora Mathirai found to be 5.17 that is weekly acidic and safe in pH. The weekly acidic drugs are rapidly absorbed from stomach. So the drug Pacchai Karpoora Mathirai can act rapidly on oral administration.

In-vitro Anti-Inflammatory Activity of Pacchai Karpoora Mathirai by Protein (Albumin) denaturation Assay: The result obtained from the present study clearly indicates that the test drug Pacchai Karpoora Mathirai (PKM) was effective in inhibiting heat induced albumin denaturation. Maximum percentage inhibition of about 65.95% was observed at 500 µg/ml when compared to that of the Diclofenac sodium, a standard anti-inflammatory agent with the maximum inhibition 84.41% at the concentration of 100 µg/ml.

Clinical Presentation:

In the clinical trail of the 40 patients Fever-reduced in 90%of cases,cough with expectoration reduced in 62.5% of cases, running nose reduced in 85% of cases, constipation in 92.5% of cases,malaise reduced in 80% of cases. The clinical improvements were accurately noted and further follow up was made in outpatient department.

Age:

In the present study, maximum number of patients were in the age group of 8-10 years (70%) and 11-12 years (30%) cases were noted.

Sex:

Maximum number of patients (42.5%) were male child&(57.5%) were female child.

Socio economic status:

About 20% patients were under lower Income Group,67.5 % patients were under middle Income Group and 12.5 % patients were under high Income Group. The highest incidence occurred in middle income Group.

Diet:

According to diet, high incidence of cases 85% was noted in non vegetarian and in vegetarian 15% cases were noted.

Religion:

According to Religion, high incidence of cases (85%) was noted in Hindu. In Christian was 5 %, and in Muslims 10% cases were noted.

Seasonal Variation:

Winter season was the triggering factor in aggravation of the disease kabasuram. nearly 35% of the patients was observed in munpanikalam&40% in pinpanikalam. kabasuram is highly influenced by seasonal variations.

Vali (Vatham)

Due to the derangement of different vatha the following symptoms occur. Pranan was affected in 100% cases and causes cough and expectoration Abanan was affected in 30% and causes constipation. Samanan was affected in 100% cases and causes loss of appetite. Uthanan was affected in 100% of cases and causes cough, Kirukaran was affected in 65%and causes running nose. Devathathan was affected in 100% cases and causes malaise.

Azhal (Pitham)

Due to the derangement of Pitham the following symptoms occur. Anarpitham was affected 65% and causes poor appetite. Ranjakam was affected 10% and causes reduced haemoglobin. Saathakam was affected 100% and causes fatigue and malaise.

Iyyam (Kabam)

Due to derangement of kabamAvalambagam was affected 100% and causes cough. Klethagam was affected 95% and causes poor appetite, Pothagam was affected in 100% of cases increased temperature, Tharpagam-burning sensation of both eyes present 77.5%, Santhigam-joint pain present in 55 % .

Ezhuudarkattugal

In Ezhuudalkattukal, Saram was affected 100% and causes malaise, fatigue.,Seneer was affected 12.5% causes anaemia, anorexia and generalized weakness of the body.

Naadi:

Vathapitham was observed in 30% of cases, Pithavatham was observed in 40% of cases, Pithakabam was observed in 17.5% of cases, kabapitham was observed in 5% of cases. According to naadi, high distribution observed in Vathapitham,Pithavatham and Pithakabam.

Envagaithervugal:

According to this study, Naa was affected in 100% of cases (coated, and pallor) Vizhi were affected in 15% of cases (pallor), Niram was affected in12.5% Sparisam was affected in 100% of cases (raised temperature) Malam was affected in 32.5 % of cases.

Neerkuri:

Regarding moothiram, neerkuri showed straw coloured urine in all cases

Neikuri :

In the present study, 27.5% was observed as pithaneikuri and 72.5% was observed as kabaneikuri. According to this neikuri, kabam was dominately affected.

Thinai:

According to thenai, high incidence of cases 45 % was noted in Kurinji and in Neithal 55% cases were noted.

The Kabasuram score of Pacchai Karpoora Mathirai, before and after treatment were 4.2750 ± 2.1362 and 0.9750 ± 1.3865 respectively which is statistically significant.(t – value 9.253, $p < 0.00$).

7. SUMMARY

The Study on Kabasuram is done to explore the identity of the illness for the children & to review the Siddha Literature. The Literature evidence of both Siddha & modern were reviewed & recent studies on the individual drugs of the trial drug were collected.

The drug which are mentioned in siddha literature for the management of Kabasuram were selected and the study is conducted after the proposal was screened by the screening committee of National Institute of Siddha.The clinical study has been approved by IEC of NIS,approved no:NIS/IEC/9/2014-15/22-26.08.2015.The trial registred in clinical trial registry of India with reg no:CTRI/2017/05/008457

The Authentication of ingredients of the trial drug was obtained from medicinal Botanist NIS Chennai and CRRI, Arumbakkam, Chennai .Purification of raw drugs and preparation of trail drug was done at Gunapadam Laboratory, Department of Gunapadam, NIS, Chennai.Bio Chemical Analysis of trial drug was done in Biochemistry Laboratory, Department of Biochemistry, NIS Chennai.Physio chemical analysis was done in CRRI, Arumbakkam, Chennai.

Patients attending the Kuzhandhai maruthuvam OPD, AyothidossPandithar hospital of NIS having the compliance of Kabasuram, diagnosed clinically and the patients were observed. Clinical symptoms of kabasuram emphasis with the symptoms of acute bronchitis like Fever, Cough with or without expectoration, constipation, poor appetite and myalgia. Clinical diagnosis of kabasuram was done on the basis of clinical features described in Balavagadam text. Diagnosis had been made out based on the specially prepared proforma, including all clinical signs and symptoms of the disease, in which detailed history had been taken.According to the Literature evidence the Symptoms of Kabasuram may be correlated with acute bronchitis.

The medicine chosen for this clinical trial is Pacchai Karpoora Mathirai internally once a day .All the patients were kept under diet control during the treatment. The clinical efficacy of the drug was analyzed statistically on all the symptoms based on the assessment criteria.

Kabasuram explained in siddha paediatric text balavagadam having the symptoms of fever,dry or productive cough,breathing difficulty,constipation,Running nose,Malaise which are in the close familiarity with the clinical manifestation of acute bronchitis.

Among 40 cases,40(100%) cases had fever,37(92.5%) cases had cough,25(62.5%) cases had running nose,15(37.5%) cases had constipation,39(97.5%) cases had malaise,19(47.5%) cases had breathing difficulty.

At the end of the treatment amongst 40 cases 100% of cases got relief from fever,amongst 37 cases,54% of cases got relief from cough,amongst 19 cases,68.4% of case got relief from breathing difficulty,amongst 15 cases,93.3% of cases got relief from constipation,amongst 25 cases 64% of cases got relief from running nose,amongst 39 cases,35,8% of cases got relief from malaise.

From the above results it is evident that signs and symptoms explained in siddha and modern literatures are mostly reflected and in coherence with in the paediatric population.

The Kabasuram score of Pacchai Karpoora Mathirai, before and after treatment were 4.2750 ± 2.1362 and 0.9750 ± 1.3865 respectively which is statistically significant.(t – value 9.253, $p < 0.00$).

The reduction of Kabasuram score from the start of treatment is 55 % at the end of the treatment. About 55% gives good result,37.5% of children gives moderate result &7.5% cases were poor result.

The observation made during the clinical study showed that the trail drug, Pacchai Karpoora Mathirai was clinically effective on Kabasuram (Acute bronchitis) .

8.CONCLUSION

The present study indicates the purity and stability of the test drug Pacchai Karpoora Mathirai. The test drug in-vitro Anti-Inflammatory Activity, from the result of the study it was concluded that the test drug Pacchai Karpoora Mathirai possess promising anti-inflammatory property in protein denaturation assay.

In the present study the trail drug Pacchai Karpoora Mathirai is treated to the children of age group 8-12 yrs. All the forty patients of Kabasuram were treated with Pacchai Karpoora Mathirai (65mg) internally once a day. The ingredients of Pacchai Karpoora Mathirai are easily available and very much affordable to all people. The trial medicine has many properties to control the signs and symptoms of Kabasuram. During the course of treatment, no adverse interactions were observed.

Clinical results were found to be significantly good improvement in 55% of cases, moderately in 37.5 % of cases. Because of the encouraging results clinically, the study may be carried over to further researches, pharmacological study, toxicity, and it may motivate the upcoming generation to manage the disease Kabasuram through the Siddha medicine and also this study throw a new glitters to Siddha scientific community.

9.BIBILIO GRAPHY

- Dr. K. S. Murugesa Mudhaliar, Dr. Ponn. Sironmani, Kuzhandhai Maruthuvam, 4 th Edition, 2007
- Dr. Sundharajan, Pillaipini maruthuvam,4 th edition
- Dr. S Chidambaradhanu Pillai, Kuzhandhaikalin noigal,Siddha Medical Literature Research Centre, part 3, 1 st Edition .
- Dr. Nelson, Text book of Paediatrics Volume II second edition page 1174
- Dr. S. Somasundaram, Taxonomy of Angiosperms, 2 nd Edition, 2003.
- Dr. K. S. Murugesa Mudhaliar, Gunapadam, Porut Panbu Nool, Mooligai Vagupu, 2 nd Edition, 2006.
- Dr. Sornamariyammal, Siddha Marunthakiyal Vidhigalum Seimuraigalum, 1 st edition, 1995.
- T. V.Sambasivam Pillai, Tamil – English Dictionary of Medicine, 2 nd Edition, Directorate of Indian Medicine, Chennai.
- Dr. R. Thiyagarasan, Gunapadam (Thathu – Seeva vagupu), 4 th Edition, 2004.
- Dr. Shanmugavelu, Noikaluku Siddha Parikaram, 2 nd Edition, 2001, page no. 191, Directorate of Indian Medicine, Chennai.
- Tamil-English Dictionary of medicine,chemistry,Botony and Allied science, Tv sambasivam pillai,2nd edition,directorate of indian medicine.
- The Reputed Antipyretic Action of Camphor.ELDON M. BOYD, AND KATHLEEN G. W. SEYMOUR.From the Department of Pharmacology, Queen's University, Kingston, Canada
- Tamil.
- Journal of Advanced scientific research.j.adv.sci.reg,2010.(2):19-23**.**
- The American journal of chinese medicine,(An international journal of comparative medicine east and west).
- Food chemistry (volume-94,issue4,march 2006,pages 520-528
- Antibacterial activity of myristica fragrans evidence based complementary and alternative medicine volume 2012(2012) article ID825362,7 pages ·
- *Antioxidant and antimicrobial potential of nutmeg myristica fragrans houtt) Journal of genetic engineering and biotechnology vol-11,issue1,june 2013,pages 25-31*

- Indian Journal of dermatologyl (Indian j Dermatol.2008;53(4):163-166.
- htts://www.orgnicfacts.net , www.orgmedchemlett.com
- www.science direct .com
- https:/herbspathy.com
- www.science.info
- webmd.com
- The wealth of india-Raw materials vol-2
- www.research gate .net/publication/264972570
- Antioxidant and Antimicrobial activity of nutmeg(myristica fragrans)
- https://www.ncbi.nlm.nih.gov/pmc/articles/pmc 2763764/
- https//www.drugs.com/cg/acute-bronchitis-in-children.homl
- emedicine.medscape.com/article/1001332-overview
- w.w.w natural medicine journal .com/journal .com/2012-09/aloe-vera-gel-research-review
- Siddha maruntaakiyal vidhigalum seimuraigalum,Dr.sornamaariyammal,directorate of indian medicine ,Chennai.
- Text book of microbiology,Anandhanarayanan and panikkar 7th edition,universities press.
- Maruthuva thavaraviyal (dr .s.somasundharam –Msc,mphil,phd vol1
- Noinadal-Dr.m.shanmugavelu.h.p.i.m)
- Wikipedia, the free encyclopedia

NATIONAL INSTITUTE OF SIDDHA

AYOTHIDOSS PANDITHAR HOSPITAL, CHENNAI – 600 047.

DEPARTMENT OF KUZHANDHAI MARUTHUVAM

CLINICAL EVALUATION OF PACCHAI KARPOORA MATHIRAI FOR KABASURAM (ACUTE BRONCHITIS) IN CHILDREN.

FORM I - SCREENING

1. S.No:	**2. OP / IP No:**	**3. Name:**
4. Age:	**5. Sex:**	**6. Date:**
7. Informant:	**8. Reliability:**	

INCLUSION CRITERIA	**YES**	**NO**
• **Age : 8 – 12 years**	☐	☐
• **Temperature 99-101°F**	☐	☐
• **Difficulty in breathing**	☐	☐
• **Dry or Productive cough**	☐	☐
• **Constipation**	☐	☐
• **Running nose**	☐	☐
• **Malaise**	☐	☐
EXCLUSION CRITERIA		
• **Temperature >101°F**	☐	☐
• **Fever > 3 days**	☐	☐
• **Pneumonia,Convulsions**	☐	☐
• **Typhoid,Malaria**	☐	☐
• **Active primary complex**	☐	☐
• **Rheumatic fever,UTI**	☐	☐
ADMITTED TO STUDY	**YES** ☐	**NO** ☐
If YES,	**OPD** ☐	**PD** ☐

Date:
Station:
Signature of the Guide

Signature of the Investigator

Signature of the HOD

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AYOTHIDOSS PANDITHAR HOSPITAL, CHENNAI – 600 047.

DEPARTMENT OF KUZHANDHAI MARUTHUVAM

CLINICAL EVALUATION OF PACCHAI KARPOORA MATHIRAI(A SIDDHA DRUG IN THE TREATMENT OF KABASURAM(ACUTE BRONCHITIS) IN CHILDREN.

FORM II - CONSENT FORM

CERTIFICATE BY INVESTIGATOR

I certify that I have disclosed all the details about the study in the terms readily understood by the parent/guardian

Date: **Signature:**

Station: **Name:**

CONSENT BY PARENT

I have been informed to my satisfaction, by the attending physician, the purpose of the clinical trial, and the nature of drug treatment and follow-up to monitor and safeguard my son/daughter's body functions.I am aware of my right to opt my son/daughter out of the trail at any time during the course of the trail without having to give the reasons for doing so. I exercising my free power of choice, hereby give my consent to include my son/daughter as a subject in the CLINICAL EVALUATION OF PACCHAI KARPOORA MATHIRAI(A SIDDHA DRUG)IN THE TREATMENT OF KABASURAM(ACUTE BRONCHITIS) IN CHILDREN.

Date: **Signature of the parent:**

Station: **Name:**

Signature of witness:

Name:

Relationship of the witness:

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FORM-II(B)

ASSENT FORM (By Patient)

1. Sl.No: **2. OP / IP No:** **3. Name:**

4. Age: **5. Sex:** **6. Date:**

7. Informant: **8. Reliablity:**

I, _____ understand that my parents_____ (mom and dad)/ guardian have/ has given permission (said it's okay) for me to take part in this study entitled "CLINICAL EVALUATION OF PACCHAI KARPOORA MATHIRAI FOR KABASURAM (ACUTE BRONCHITIS) IN CHILDREN" done by Dr.R.Saraswathi.

I am taking part because I want to take part. I have been told that I can stop at any time I want to do so and nothing will happen to me if I want to stop.

Date: **Signature of the patient:**

Station: **Name:**

Signature of the parent:

Name:

Signature of the witness:

Name:

Relationship of the witness:

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FORM III-CASE REPORT FORM

HISTORY TAKING

OP/IP No.	**Visit Date : (__/__/____)**
Name :	
Age :	
Gender : Male child ☐ **Female child ☐**	**Date Of Birth : (__/__/____)**
Father/ Mother /Guardian Name :	
Father's Occupation :	
Father's Monthly Income :	
Religion :	
Socioeconomic Status :	
Patient Information :	
Reliability:	
Address	

Complaints and Duration

Present illness

History of Past Illness

Family History

Any Hereditary/ Familial Disease **Yes** **No**

If Yes, Details _____

Immunisation History

Proper Immunization given Yes ☐ **No** ☐ _____

Food habits:

1. **Veg** ☐ **2. Non-Veg** ☐ **3. Mixed** ☐

Personal habits:	**YES**	**NO**
1. Picca	☐	☐
2. Nail biting	☐	☐
3. Bowel movements	☐	☐
4. Unhygienic food and drinks	☐	☐

General Examination	YES	NO
1. Pallor	☐	☐
2. Jaundice	☐	☐
3. Cyanosis	☐	☐
4. Clubbing	☐	☐
5. Pedal oedema	☐	☐
6. Lymphadenopathy	☐	☐

Vital signs:-

1. **Pulse rate / minute**
2. **Heart rate / minute**
3. **Respiratory Rate / minute**
4. **Temperature**

Anthropometry:-

Height ☐

Weight ☐

CLINICAL EXAMINATION OF RESPIRATORY SYSTEM

a) Inspection:

Shape : Normal ☐ **Barrel-Shaped** ☐ **Pigeon chest** ☐
Pectus excavatum ☐ **Crowding of ribs** ☐

Movements of the chest wall: Symmetrical ☐ **asymmetrical** ☐

Shoulder Drooping : Absent ☐ **Present** ☐

Inter costal spaces : Normal ☐ **Bulge** ☐ **Indrawing** ☐

Spine : Normal ☐ **Kyphosis** ☐ **Scoliosis** ☐
Lordosis ☐

Supraclavicular fossae : Normal ☐ **Flattening** ☐ **Hollowing** ☐

b) Palpation:

Position of mediastinum:

Traile's sign : Present ☐ Absent ☐

Apical impulse : _____

Tenderness Yes ☐ No ☐

If yes _____

Tactile vocal Fremitus:Normal and equal ☐

Increased ☐

Decreased ☐

C) Percussion:

Percussion on all areas: Normal ☐

Hyper resonance ☐

Dullness ☐

Stony dullness ☐

D) Auscultation:

Intensity of breath sounds: Normal/decreased/increased _____

Adventitious sounds

Wheeze ☐ Crepitations ☐ Rub ☐ Rhonchi ☐

None of above ☐

Vocal resonance:

Normal ☐ Increased ☐ Decreased ☐

Other systems:	Normal	Affected
Cardio vascular system:	☐	☐
Gastro intestinal system:	☐	☐
Musculo skeletal system:	☐	☐
Central nervous system:	☐	☐

CLINICAL ASSESSMENT

S.NO	CLINICAL SYMPTOMS	DAY 1	DAY 3
1.	Temperature(99-101F)		
2.	Difficulty in breathing		
3.	Dry or Productive cough ☐ ☐		
4.	Constipation		
5.	Running nose		
6.	Malaise		

Kaalam:-

Kaarkalam	☐	Koothirkaalam	☐	Munpanikaalam	☐
Pinpanikaalam	☐	Illavenirkaalam	☐	Muthuvenirkaalam	☐

Yaakai

Vatham	☐	VathaPitham	☐	VathaKabam	☐
Pitham	☐	Pithavatham	☐	PithaKabam	☐
Kabam	☐	KabaVatham	☐	KabaPitham	☐

Gunam

Sathuvam ☐ **Rasatham** ☐ **Thamasam** ☐

Pori / Pulangal

	Normal	Affected	Remarks
Sevi / olli	☐	☐	
Mei / unarvu	☐	☐	
Kan / paarvai	☐	☐	
Naaku / suvai	☐	☐	
Mooku / naatram	☐	☐	

Kanmendhirium / Kanmavidayam

	Normal	Affected	Remarks
Kai / dhanam	☐	☐	
Kaal / ghamanam	☐	☐	
Vaai / vaaku	☐	☐	
Eruvaai / visarkam	☐	☐	
Karuvaai / Aanantham	☐	☐	

UyirThathukkal

Vatham

	Normal	Affected	Remarks
Pranan	☐	☐	
Abanan	☐	☐	
Viyanan	☐	☐	
Uthanan	☐	☐	
Samanan	☐	☐	
Nagan	☐	☐	

Koorman	☐	☐
Kirukaran	☐	☐
Devathathan	☐	☐
Dhanajeyan	☐	☐

Pitham

	Normal	Affected	Remarks
Analagam	☐	☐	
Ranjagam	☐	☐	
Saathagam	☐	☐	
Alosagam	☐	☐	
Prasagam	☐	☐	

Kabam

	Normal	Affected	Remarks
Avalambagam	☐	☐	
Kilethagam	☐	☐	
Pothagam	☐	☐	
Tharpagam	☐	☐	
Santhigam	☐	☐	

Udalthathukkal

	Normal	Affected	Remarks
Saaram	☐	☐	
Senneer	☐	☐	
Oon	☐	☐	

Kozhuppu ☐ ☐

Enbu ☐ ☐

Moolai ☐ ☐

Sukilam / Suronitham ☐ ☐

EnvagaiThervugal

	Normal	**Affected**	**Remarks**
Naa			
Niram	☐	☐	
Thanmai	☐	☐	
Suvai	☐	☐	
Niram	☐	☐	
Mozhi	☐	☐	
Vizhi			
Niram	☐	☐	
Thanmai	☐	☐	
Paarvai	☐	☐	
Sparisam	☐	☐	

Malam

Niram	**Normal**	☐	**Affected**	☐
Nurai	**Normal**	☐	**Affected**	☐
Elagal	**Normal**	☐	**Affected**	☐
Erugal	**Normal**	☐	**Affected**	☐

Moothiram

Neerkuri

Niram **Normal** ☐ **Affected** ☐

Edai **Normal** ☐ **Affected** ☐

Nurai **Normal** ☐ **Affected** ☐

Manam **Normal** ☐ **Affected** ☐

Enjal **Normal** ☐ **Affected** ☐

Neikuri

Vatham ☐

Pitham ☐

Kabam ☐

Others ☐

Naadi:

Vadham	☐	**Pitham**	☐	**Kabam**	☐
Vathapitham	☐	**Pithavatham**	☐	**Pithakabam**	☐
Vathakabam	☐	**Kabavatham**	☐	**Kabapitham**	☐

DRUG ISSUED : _____

Date:

Station:

Signature of the Guide **Signature of the Investigator**

Signature of the HOD

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FORM V -DRUG COMPLIANCE FORM

1.S. No: **2. OP / IP No:** **3. Name:** **4. Age:**

5.Gender:

6.Date: **7.Informant:** **8.Reliability:**

NAME OF THE DRUG:PACCHAI KARPOORA MATHIRAI

FORM OF THE DRUG:MATHIRAI

ADMINISTRATION:PER ORAL

DOSE AND DURATION:8-12 years-Ulunthalavu(65mg**)**

Single dose

DAY	DATE	TIME OF DRUG DISPENSARY
1		

Date:

Station:

Signature of the Guide

Signature of the Investigator

Signature of the HOD

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FORM VII: WITHDRAWAL

1. S.No:	**2. OP / IP No:**	**3. Name:**
4. Age:	**5. Sex:**	**6. Date:**
7. Informant:	**8. Reliability:**	

Date of trial commencement :

Date of withdrawal from trial :

Reason(s) for withdrawal :

Long absence at reporting : Yes / No

Irregular treatment : Yes / No

Shift of locality : Yes / No

Complication /Adverse reactions if any : Yes / No

Exacerbation of symptoms : Yes / No

Patient not willing to continue : Yes / No

Date:

Station:

Signature of the Guide

Signature of the Investigator

Signature of the HOD

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FORM VI – ADVERSE REACTION

1. S. No:	**2. OP / IP No:**	**3. Name:**
4. Age:	**5. Sex:**	**6. Date:**
7. Informant:	**8. Reliability:**	

Date of occurrence :

Date of withdrawal from trial :

Medicine :

Description of adverse reaction :

Date:

Station:

Signature of the Guide

Signature of the Investigator

Signature of the HOD

FORM IV – PATIENT INFORMATION SHEET

Name of Investigator : Dr.R.Saraswathi

Name of Institute : National Institute of Siddha,
Tambaram Sanatorium
Chennai.

I, Dr.R.Saraswathi studying as PG Scholar in department of KuzhanthaiMaruthuvam at National Institute of Siddha,Tambaram Sanatorium is doing an open clinical trial entitled Clinical Evaluation of PacchaiKarpooraMathirai(a siddha drug)in the treatment of KabaSuram (Acute Bronchitis) in children.

In our Siddha paediatric text,Kabasuram symptoms are nearly correlated with Acute Bronchitis.The symptoms of Kabasuram are fever,difficulty in breathing,dry or productive cough,constipation running nose,malaise.This condition is being treated in NIS with many siddha formulations.As a part of M.D(S) research programme and developing new efficacious medicine,I have proposed to study the efficacy of trail drug PACCHAI KARPOORA MATHIRAI in treating this disease.This formulation has been mentioned in siddha literature and empirical evidence with will maintain confidentiality of your comments and data obtained. There will be no risk of disclosing your identity and no physical, psychological or professional risk is involved by taking part in this study. No compensation will be paid to you for taking part in this study.

You can choose not to take part. However, taking part in the study may be of benefit to the scientific community, as it may help us to understand the problem of defaulters and potential solutions If you agree your child to be a participant in this study, he/she will be included in the study primarily by signing the consent form and then you will be given the internal medicine PacchaikarpooraMathirai(65mg) once a day.

The information I am collecting in this study will remain between you and the investigator (myself).If you wish to find out more about this study before taking part, you can ask me directly or through my mobile number 8678912184. You can also contact the Member-secretary of Ethics committee, National Institute Siddha, Tel no: 91-44-22380789

தேசிய சித்த மருத்துவ நிறுவனம்

அயோத்திதாச பண்டிதர் மருத்துவமனை, சென்னை-47

குழந்தை மருத்துவத் துறை

கபசுர நோய்க்கான பச்சை கற்பூர மாத்திரையின் பரிகரிப்புத் திறனைக் கண்டறியும் மருத்துவ ஆய்வு

ஒப்புதல் படிவம்

ஆய்வாளரால் சான்றளிக்கப்பட்டது

நான் இந்த மருத்துவ ஆய்வு குறித்த அனைத்து விபரங்களையும் நோயாளியின் பெற்றோருக்குப் புரியும் வகையில் எடுத்துரைத்தேன் என உறுதி அளிக்கிறேன்.

தேதி: **கையொப்பம்:**

இடம்: **பெயர்:**

நோயாளியின் பெற்றோர் ஒப்புதல்

என்னிடம் இந்த மருத்துவ ஆய்வின் காரணத்தையும்,மருந்தின் தன்மை மற்றும் மருத்துவ வழிமுறை பற்றியும், இந்த மருத்துவத்தைத் தொடர்ந்து எனது குழந்தையின் உடல் இயக்கத்தைக் கண்காணிக்கவும்,அதனைப் பாதுகாக்க பயன்படும் மருத்துவ ஆய்வுகள் பற்றியும் திருப்தி அளிக்கும் வகையில் ஆய்வு மருத்துவரால் விளக்கிக் கூறப்பட்டது.

நான் இந்த மருத்துவ ஆய்வின் போது காரணம் எதுவும் கூறாமல் எப்பொழுது வேண்டுமானலும் என் குழந்தையை விடுவித்துக் கொள்ளும் உரிமையைத் தெரிந்திருக்கிறேன்.

நான் என்னுடைய சுதந்திரமாகத் தேர்வு செய்யும் உரிமையைக் கொண்டு கபசுர நோய்க்கான பச்சை கற்பூர மாத்திரையின் பரிகரிப்புத்திறனை கண்டறியும் மருத்துவ ஆய்வுக்கு எனது குழந்தையை உட்படுத்த ஒப்புதல் அளிக்கிறேன்.

தேதி: **பெற்றொர் கையொப்பம்:**

இடம்: **பெயர்:**

சாட்சிக்காரர் கையொப்பம்:

பெயர்:

சாட்சிக்காரர் உறவுமுறை:

தேசிய சித்த மருத்துவ நிறுவனம்

அயோத்திதாச பண்டிதர் மருத்துவமனை, சென்னை-47

குழந்தை மருத்துவத் துறை

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ஒப்புதல் படிவம் குழந்தைக்கானது

_____ ஆகிய நான் தேசிய சித்த மருத்துவ நிறுவனத்தில் பட்டமேற்படிப்பு குழந்தை மருத்துவத் துறையில் பயிலும் மரு.இரா.சரஸ்வதி அவர்களால் நடத்தப்படும் கபசுர நோய்க்கான பச்சை கற்பூர மாத்திரையின் பரிகரிப்புத் திறனைக் கண்டறியும் மருத்துவ ஆய்வில் பங்கேற்பதற்கு எனது பெற்றோர்/காப்பாளர் திரு/திருமதி._____சம்மதம் தெரிவித்திருப்பதை நன்கு அறிவேன்.

எனக்கு இந்த ஆராய்ச்சி பற்றி புரியும் வகையில் எடுத்துரைக்கப்பட்டுள்ளது. இவ்வாராய்ச்சியில் இருந்து எப்போது வேண்டுமானாலும் விலக எனக்கு உரிமை இருக்கின்றது என்பதைப் பற்றியும் நன்கு தெரிந்துகொண்டு இந்த ஆராய்ச்சியில் பங்கேற்க சம்மதிக்கிறேன்.

தேதி:

இடம்:

குழந்தையின் கையொப்பம்:

பெயர்:

பெற்றொர் கையொப்பம்:

பெயர்:

சாட்சிக்காரர் கையொப்பம்:

பெயர்:

சாட்சிக்காரர் உறவுமுறை:

தேசிய சித்த மருத்துவ நிறுவனம்

அயோத்திதாச பண்டிதர் மருத்துவமனை, சென்னை-47

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தகவல் படிவம்

ஆராய்ச்சியாளர் பெயர்:இரா.சரஸ்வதி

மருத்துவ ஆய்விற்கான தகவல் படிவம்

தேசிய சித்த மருத்துவ நிறுவனத்தில் குழந்தை மருத்துவத் துறையில் பட்ட மேற்படிப்பு பயின்று வரும் இரா.சரஸ்வதி ஆகிய நான் கபசுர நோய்க்கான பச்சை கற்பூர மாத்திரையின் பரிகரிப்புத் திறனைக் கண்டறியும் மருத்துவ ஆராய்ச்சியில் ஈடுபட்டுள்ளேன்.கபசுரம் என்னும் நோயில் சுரம்,சளி,இருமல்,மலக்கட்டு,மூச்சுவிடசிரமம்,மூக்கில் நீர் வடிதல் ஆகிய குறிகுணங்கள் காணும்.சித்த மருத்துவ பட்ட மேற்படிப்பில் ஆய்வின் ஒரு பகுதியாக கபசுரம் நோய்க்கான பச்சை கற்பூர மாத்திரையின் பரிகரிப்புத் திறனை கண்டறியும் ஆய்வினை மேற்கொண்டுள்ளேன்.

இது சம்பந்தமான குழந்தையின் அனைத்து விவரங்களும் இரகசியமாக வைக்கப்படும் என உறுதி அளிக்கிறேன். இது போன்ற விவரங்களை தெரிவிப்பதால் தங்களுக்கோ தங்களது குழந்தைக்கோ தங்களின் வேலை தளத்திலோ எந்த ஒரு பாதிப்பும் ஏற்படாது. இதில் பயணப்படி முதலிய எந்த உதவித்தொகையும் வழங்கப்படமாட்டாது.இந்த ஆராய்ச்சிக்கு நோயினராக சேர்ந்த பிறகு உங்களுக்கு விருப்பம் இல்லையெனில் எப்போது வேண்டுமானாலும் தங்களது குழந்தையை விலக்கிக் கொள்ளலாம். இருந்தாலும் இந்த மருத்துவ ஆய்வில் சேர்வதன் மூலமாக தங்களது குழந்தையின் நோய் குறைவது மட்டுமல்லாமல் மருத்துவத் துறை சார்ந்த வல்லுநர்களுக்கு இந்த நோய்க்கான தீர்வுகளை கண்டறிவதற்கு மிகவும் உதவியாக இருக்கும்.இந்த ஆராய்ச்சிக்கு தங்களது விருப்பத்தின் பேரில் தங்களது குழந்தையை உட்படுத்தும் பட்சத்தில் முதன்மையாக ஒப்புதல் படிவத்தில் கையெழுத்திட்ட பின்பு தாங்கள் உள்மருந்தாக பச்சை கற்பூர மாத்திரை ஒருமாத்திரை(65 மி.கி)ஒரு வேளை தரவேண்டும்.

இந்த மருத்துவ ஆய்வின் தொடர்பாக உங்களிடமிருந்து சேகரிக்கப்படும் அனைத்து விவரங்களும் உங்களுக்கும் ஆராய்ச்சியாளரான எனக்கும் மட்டுமே அறிந்திருக்கக் கூடியதாக இருக்கும்.இந்த ஆராய்ச்சி சம்மந்தமாக மற்ற விபரங்களையும் நோயின் தன்மை பற்றியும் அறிவதற்கு ஆராய்ச்சியாளரான மரு.இரா.சரஸ்வதி கைபேசி எண் 8678912184 தொடர்பு கொள்ளலாம்.மேலும் இந்த ஆராய்ச்சி தொடர்பாக நிறுவன நீதிநெறி குழு,தேசிய சித்த மருத்துவ நிறுவனம், தொலைபேசிஎண் 91-44-22380789 தொடர்பு கொள்ளலாம்.

The Tamil Nadu Dr.M.G.R.Medical University

69,Anna Salai,Guindy,Chennai - 600 032.

This Certificate is awarded to Dr/Mr/Mrs.....R.:..Saraswathi.....

for participating as ~~Resource~~ ~~Person~~ / Delegate in the Nineteenth Workshop on

" RESEARCH METHODOLOGY & BIOSTATISTICS "

*For **AYUSH Post Graduates & Researchers***

Organized by the Department of Siddha

The Tamil Nadu Dr. M.G.R. Medical University from 07 th to 11 th September 2015.

Dr.N.KABILAN, M.D.(Siddha)
READER,DEPT.OF SIDDHA

Prof. **Dr.P.ARUMUGAM,** M.D.,
REGISTRAR I/C

Prof. **Dr.D.SHANTHARAM,** M.D., D.Diab.,
VICE CHANCELLOR

NATIONAL INSTITUTE OF SIDDHA
राष्ट्रीय सिद्ध संस्थान
Department of AYUSH- MINISTRY OF HEALTH & FAMILY WELFARE
आयुष विभाग - स्वास्थ एवं परिवार कल्याण मंत्रालय
GOVERNMENT OF INDIA-भारत सरकार
TAMBARAM SANATORIUM, CHENNAI -600 047 -ताम्बरम सनटोरियम चेन्नई -600 047
फ़ोन\Tele : 044-22411611 फैक्स\Fax : 22381314
ईमेल: nischennaisiddha@yahoo.co.in वेब :www.nischennai.org

F.No.NIS/6-20/IEC/15-16 Dt: 05.10.2015

CERTIFICATE

Address of Ethics Committee: National Institute of Siddha, Tambaram Sanatorium, Chennai-600047, Tamil Nadu, India	
Principal Investigator:Dr.R.Saraswathi, Department of Kuzhandhai Maruthuvam	
Protocol title: A Clinical Evaluation of "PACHAI KARPOORA MATHIRAI" a Siddha Drug in the treatment of "KABA SURAM" (Acute Bronchitis) in Children.	
Documents filed	1) Protocol, 2) Data Collection forms 3) SAE(Pharmacovigilance)
Clinical trial Protocol (others – Specify)	Yes
Informed consent documents	Yes
Any other documents	-
Date of IEC approval & its number	NIS/IEC/9/2014-15/22 – 26.08.2015

We approve the trial to be conducted in its presented form.

The Institutional Ethics Committee expects to be informed about the progress of the study, any SAE occurring in the course of the study.

Chairman Member Secretary

NATIONAL INSTITUTE OF SIDDHA, CHENNAI – 600047

BOTANICAL CERTIFICATE

Certified that the following plant drugs used in the Siddha formulation "**Pacchai Karpoora Mathirai**" (Internal) for Kaba suram taken up for Post Graduation Dissertation studies by **Dr.R.Saraswathi**, M.D.(S), II year, Department of Kuzhandhai Maruthuvam, 2016, are identified through Visual inspection, Experience, Education & Training, Organoleptic characters, Morphology, Micromorphology and Taxonomical methods as

Cinnamomum verum Presl. (Lauraceae), Stem Bark
Myristica fragrans Houtt. (Myristicaceae), Nut
Croton tiglium Linn. (Euphorbiaceae), Seed
Aloe barbadensis Mill. (Liliaceae), Leaf juice

MEDICINAL BOTANY CHENNAI 600 047 National Institute of Siddha

Certificate No: NISMB2322016

Date: 8-6-2016

Authorized Signatory

Dr. D. ARAVIND, M.D.(s),M.Sc.,
Assistant Professor
Department of Medicinal Botany
National Institute of Siddha
Chennai - 600 047, INDIA

NATIONAL INSTITUTE OF SIDDHA- राष्ट्रीय सिद्ध संसथान
Ministry of AYUSH- आयुष मंत्रालय
GOVERNMENT OF INDIA-भारत सरकार
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फ़ोन\Tele : 044-22411611 फैक्स\Fax : 22381314
ईमेल: nischennaisiddha@yahoo.co.in वेब :www.nischennai.org

F.No:NIS/4-5/Academic/Student corres./2015-16 Date:13.01.16

To
The Director
Siddha Central Research Institute,
Arignar Anna Hospital Campus,
Arumbakkam,
Chennai-600 106.

Sub: Dr.R.Saraswathi -Dissertation - Authentication of the raw drugs – Permission requested-Reg.

Sir,

I am to inform you that Dr.R.Saraswathi,II year Department of Kuzhandhai Maruthuvam needs to get authentication of her mineral drug **"Pacchai Karpooram"** for her Dissertation Study and she has been permitted to get authentication from Siddha Central Research Institute.

It is requested that necessary authentication for the drug may be done

Yours faithfully,

13-1-16

(Dr.M.Rajasekaran)
Director i/c

Copy to:

1. HOD i/c Kuzhandhai Maruthuvam
2. Dr.R.Saraswathi ,II year Dept. of Kuzhandhai Maruthuvam

Noble research solutions
We Trust in Quality and Ethics

Noble Research Solutions

We Trust in Quality and Ethics

E-mail: nobleresearchsolutions@gmail.com
Contact: 9710437419, Admin: 044 - 42691289

Date: 23.03.2017

To,

Dr.Saraswathi

National Institute of Siddha

Tambaram Sanatorium, Chennai - 600 047, Tamil Nadu, India.

Project Id : NRS/AS/0032/02/2017

Project Delivery Report

S.No	Study Description	Annexure no
1.	Evaluation of In-Vitro anti-Inflammatory Activity of *Patchaikarpora mathirai* by Protein (Albumin) denaturation Assay	I

Note:

- *Annexures was attached as a separate enclosure along with this report.*

NOBLE RESEARCH SOLUTIONS TAMIL NADU INDIA. CHENNAI

Clinical Trial Details (PDF Generation Date :- Tue, 06 Jun 2017 10:50:38 GMT)

CTRI Number	CTRI/2017/05/008457 [Registered on: 03/05/2017] - **Trial Registered Prospectively**
Last Modified On	28/04/2017
Post Graduate Thesis	Yes
Type of Trial	Interventional
Type of Study	Drug Siddha Screening
Study Design	Single Arm Trial
Public Title of Study	Clinical evaluation of Pachai karpoora Mathirai for Acute Bronchitis.
Scientific Title of Study	A Clinical evaluation of Pachaikarpoora Mathirai(a siddha drug) in The Treatment of Kaba suram(acute bronchitis) in children.

Secondary IDs if Any

Secondary ID	Identifier
NIL	NIL

Details of Principal Investigator or overall Trial Coordinator (multi-center study)

Details of Principal Investigator	
Name	Dr R Saraswathi
Designation	PG Scholar
Affiliation	National institute of siddha
Address	Department of Kuzhandhai Maruthuvam National institute of siddha Ayothidoss pandithar hospital Tambaram sanatorium Chennai 47 National institute of siddha Ayothidoss pandithar hospital Tambaram sanatorium Chennai 47 Kancheepuram TAMIL NADU 600047 India
Phone	8678912184
Fax	
Email	dr.saraswathilingam@gmail.com

Details Contact Person (Scientific Query)

Details Contact Person (Scientific Query)	
Name	Dr M Meenatchi suntharam
Designation	Associate professor
Affiliation	National institute of siddha
Address	Department of Kuzhandhai Maruthuvam National institute of siddha Ayothidoss pandithar hospital Tambaram sanatorium Chennai 47 National institute of siddha Ayothidoss pandithar hospital Tambaram sanatorium Chennai 47 Kancheepuram TAMIL NADU 600047 India
Phone	9940266442
Fax	
Email	mmssiddha@rediffmail.com

Details Contact Person (Public Query)

Details Contact Person (Public Query)	
Name	Dr M Meenakshisundaram
Designation	Associate Proffessor
Affiliation	National institute of siddha
Address	Department of Kuzhandhai MaruthuvamNational institute of siddha Ayothidoss pandithar hospital Tambaram sanatorium Chennai 47

		National institute of siddha Ayothidoss pandithar hospital Tambaram sanatorium Chennai 47 Kancheepuram TAMIL NADU 600047 India
	Phone	9444214582
	Fax	
	Email	mmssiddha@gmail.com

Source of Monetary or Material Support

Source of Monetary or Material Support
> self

Primary Sponsor

Primary Sponsor Details	
Name	National Institute of Siddha
Address	Department of kuzhandhai maruthuvam National institute of siddha Ayothidoss pandithar hospital Tambaram sanatorium Chennai 47
Type of Sponsor	Research institution and hospital

Details of Secondary Sponsor

Name	Address
NIL	NIL

Countries of Recruitment

List of Countries
India

Sites of Study

Name of Principal Investigator	Name of Site	Site Address	Phone/Fax/Email
Dr R Saraswathi	National Institute of Siddha	OP NO 9 Department Of Kuzhandhai Maruthuvam National institute of siddha Ayothidoss padithar hospital Tambaram sanatorium Chennai 47 Kancheepuram TAMIL NADU	8678912184 dr.saraswathilingam@gmail.com

Details of Ethics Committee

Name of Committee	Approval Status	Date of Approval	Is Independent Ethics Committee?
Institutional Ethics Committee	Approved	26/08/2015	No

Regulatory Clearance Status from DCGI

Status	Date
Not Applicable	No Date Specified

Health Condition / Problems Studied

Health Type	Condition
Patients	Patients with the symptoms of Fever difficulty to breathing dry or productive cough constipation running nose malaise

Intervention / Comparator Agent

Type	Name	Details
Comparator Agent	NOT APPLICABLE	NOT APPLICABLE
Intervention	PACCHAI KARPPORA MATHIRAI	PACCHAI KARPOORA MATHIRAI is a polyherbal formulation 1 tablet od 8 to12 years oral route 1 day

Inclusion Criteria

Inclusion Criteria	
Age From	8.00 Year(s)
Age To	12.00 Year(s)

	Gender	Both
	Details	Patients with symptomps of Temperature 99-101degree fahrenheit difficulty in breathing dry or productive cough constipation running nose malaise willing to give specimen of blood for investigation when required

Exclusion Criteria

Exclusion Criteria	
Details	Temperature above 101 degree fahrenheit fever above 3 days H/O Convulsion H/O Typhoid H/O Malaria H/O Jaundice H/O Active primary complex H/O Pneumonia H/O Rheumatic fever H/O UTI Patient not willing to give consent for study

Method of Generating Random Sequence	Not Applicable
Method of Concealment	Not Applicable
Blinding/Masking	Not Applicable

Primary Outcome

Outcome	**Timepoints**
Results and observation during the study inclusive of clinical improvement	1 day

Secondary Outcome

Outcome	**Timepoints**
clinical efficacy of the trail drug and its side effects if any	The experimental drug may have good efficacy and safety in clinical study

Target Sample Size	**Total Sample Size**=40 **Sample Size from India**=40
Phase of Trial	Phase 2
Date of First Enrollment (India)	15/05/2017
Date of First Enrollment (Global)	No Date Specified
Estimated Duration of Trial	**Years**=1 **Months**=0 **Days**=0
Recruitment Status of Trial (Global)	Not Applicable
Recruitment Status of Trial (India)	Not Yet Recruiting
Publication Details	NIL
Brief Summary	In siddha system of medicine,Symptoms of Kaba suram are described as fever, cough, abdominal distension along with constipation, malaise and it may be correlated with acute bronchitis. In our NIS OPD many number of cases are approaching kuzhandhai maruthuvam department daily with the symptoms of kabasuram.so i select this drug pachai karpoora mathirai which consist of pachai karpooram,elavangapattai,jathikai,nervalam,katrazhai saru .first mentioned three drugs is grinded along with juice of aloevera for about four samam(12 hours) and then with nervalam.now this made into a ulunthalavu (65 mg) tablet.To evaluate the efficacy of pachai karpoora mathirai(a siddha drug) in the treatment of kaba suram (acute bronchitis) in children.